

ORDINANCE _____

AN ORDINANCE relating to the Seattle Residential Code, amending Section 22.150.010, and adopting by reference Chapters 2 through 10, 12 through 24, 44, and Appendices F and G of the 2009 International Residential Code, and amending certain of those chapters; adopting a new Chapter 1 related to administration, permitting and enforcement; and repealing Sections 2 -15 of Ordinance 122533 and Sections 1-9 of Ordinance 122774.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.150.010 of the Seattle Municipal Code is amended as follows:

22.150.010 Adoption of International Residential Code.

The Seattle Residential Code consists of: 1) the following portions of the ~~((2006))~~ 2009 edition of the International Residential Code published by the International Code Council: Chapters 2 through 10, Chapter 12 through 24, Chapter ~~((43))~~ 44, Appendices F and G; 2) the amendments and additions to the ~~((2006))~~ 2009 International Residential Code adopted by City Council by ordinance; and 3) ~~((all errata published by the International Code Council before June 15, 2008, and 4)))~~ a Chapter 1 relating to administration, permitting and enforcement adopted by City Council by ordinance. One copy of the ~~((2006))~~ 2009 International Residential Code is filed with the City Clerk in C.F. ~~((306759))~~ _____.

Section 2. The following chapter is adopted as Chapter 1 of the Seattle Residential Code, to read as follows:

CHAPTER 1

ADMINISTRATION

SECTION R101

TITLE, SCOPE AND PURPOSE

R101.1 Title. This subtitle shall be known as the “*Seattle Residential Code*” and may be so cited, and is referred to herein as “this code.”

R101.2 Scope. The provisions of this code apply to the construction, alteration, moving, demolition, repair and occupancy of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress, and their accessory structures, including adult family homes, foster family care homes and family day care homes licensed by the Washington State Department of Social and Health Services.

Exception: Live/work units complying with the requirements of Section 419 of the *International Building Code* shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression shall conform to Section 419 of the *International Building Code*.

Note: The seismic design for wood-frame buildings with more than two stories above grade shall comply with the *International Building Code* or other standards referenced in Section R301.1. See Sections R301.2.2.3 and Table R602.10.1.2(2).

Interpretation R101.2a: Buildings with mixed occupancies, other than residences with home occupations, are not within the scope of the *Seattle Residential Code* and shall comply with the *Seattle Building Code*.

Interpretation R101.2b: Three or more dwellings located above a common garage or other common space are required to comply with the *Seattle Building Code*. Units in detached one- and two-family dwellings may share common space.

R101.3 Applicability of Seattle Residential Code. A building permit application shall be considered under the Seattle Residential and Energy codes in effect on the date a valid and fully complete building permit application is submitted or on a date as otherwise required by law.

R101.3.1 Fully complete building permit applications. A building permit application is complete if the building official determines it meets the requirements of Sections R105.5.1 through R105.5.2.5, and the application includes the construction documents for the architectural and structural components of the building. In order for the application to be deemed complete in cases when the building official allows an application for only a portion of a building, the application shall include the structural frame for the entire building.

R101.4 Purpose. The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, occupancy, location and maintenance of buildings and structures within the City and certain equipment specifically regulated herein. The purpose of this code is to provide for and promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefitted by the terms of this code.

1 **R101.5 Internal consistency.** Where in any specific case, different sections of this code specify
2 different materials, methods of construction or other requirements, the most restrictive governs.
3 Where there is a conflict between a general requirement and a specific requirement, the specific
4 requirement is applicable.

5 **R101.6 Referenced codes and standards.** The codes and standards referenced in this code are
6 considered part of this code to the extent prescribed by each such reference. Where differences
7 occur between provisions of this code and referenced codes and standards, the provisions of this
8 code apply, except that nothing in this Code limits the effect of any provision of the Grading
9 Code, Stormwater and Drainage Control Code, or Regulations for Environmentally Critical
10 Areas.
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13 **Exception:** Where enforcement of a code provision would violate the conditions of the
14 listing of the equipment or appliance, the conditions of the listing and manufacturer's
15 instructions apply.
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17 **R101.7 Appendices.** Provisions in the *International Residential Code* appendices do not apply
18 unless specifically adopted.

19 **R101.8 Metric units.** Wherever in this code there is a conflict between metric units of
20 measurement and U.S. customary units, the U.S. customary units govern.
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SECTION R102

UNSAFE BUILDINGS, STRUCTURES OR PREMISES

R102.1 Emergency orders. Whenever the building official finds that any building, structure or premises, or portion thereof, is in such a dangerous and unsafe condition as to constitute an imminent hazard to life or limb, the building official may issue an emergency order directing that the building, structure or premises, or portion thereof be restored to a safe condition by a date certain. The order may also require that the building, structure or premises, or portion thereof, be vacated within a reasonable time to be specified in the order. In the case of extreme danger, the order may specify immediate vacation of the building, structure or premises, or may authorize immediate disconnection of the utilities or energy source.

R102.1.1 Service of emergency order. The order shall be posted on the premises or personally served on the owner of the building or premises or any person responsible for the condition. The order shall specify the time for compliance.

R102.1.2 Effect of emergency order. No person may occupy a building, structure or premises, or portion thereof, after the date on which the building is required to be vacated until the building, structure or premises, or portion thereof, is restored to a safe condition as required by the order and this code. It is a violation for any person to fail to comply with an emergency order issued by the building official.

R102.2 Hazard correction order. Whenever the building official finds that an unsafe building, structure or premises exists, the building official may issue a hazard correction order specifying the conditions causing the building, structure or premises to be unsafe and directing the owner or

other person responsible for the unsafe building, structure or premises to correct the condition by a date certain. In lieu of correction, the owner may submit a report or analysis to the building official analyzing said conditions and establishing that the building, structure or premises is, in fact, safe. The building official may require that the report or analysis be prepared by a licensed engineer and may require compliance with *International Building Code* Chapter 34.

R102.2.1 Service of hazard correction order. The order shall be posted on the premises or personally served on the owner of the building or premises or any person responsible for the condition and shall specify the time for compliance.

R102.2.2 Effect of hazard correction order. It is a violation for any person to fail to comply with a hazard correction order as specified in this subsection.

SECTION R103

ENFORCEMENT, VIOLATIONS AND PENALTIES

R103.1 Violations. It is a violation of this code for any person to:

1. erect, construct, enlarge, repair, move, improve, remove, convert, demolish, equip, occupy, inspect or maintain any building or structure in the City, contrary to or in violation of any of the provisions of this code;
2. knowingly aid, abet, counsel, encourage, hire, induce or otherwise procure another to violate or fail to comply with this code;
3. use any material or to install any device, appliance or equipment that does not comply with applicable standards of this code or that has not been approved by the building official;

1 4. violate or fail to comply with any notice or order issued by the building official pursuant to the
2 provisions of this code or with any requirements of this code;

3 5. remove, mutilate, destroy or conceal any notice or order issued or posted by the building
4 official pursuant to the provisions of this code, or any notice or order issued or posted by the
5 building official in response to a natural disaster or other emergency;

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7 6. conduct work under a permit without requesting an inspection as required by Section R106.

8 **R103.2 Notice of violation.** If, after investigation, the building official determines that standards
9 or requirements of this code have been violated or that orders or requirements have not been
10 complied with, the building official may serve a notice of violation upon the owner, agent or
11 other person responsible for the action or condition. The notice of violation shall state the
12 standards or requirements violated, shall state what corrective action, if any, is necessary to
13 comply with the standards or requirements, and shall set a reasonable time for compliance.
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16 **R103.2.1 Service of notice of violation.** The notice shall be served upon the owner, agent or
17 other responsible person by personal service or regular first class mail addressed to the last
18 known address of such person, or if no address is available after reasonable inquiry, the
19 notice may be posted in a conspicuous place on the premises. The notice may also be posted
20 if served by personal service or first class mail. Nothing in this section limits or precludes any
21 action or proceeding to enforce this code, and nothing obligates or requires the building
22 official to issue a notice of violation prior to the imposition of civil or criminal penalties.
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R103.2.2 Review of notice of violation by the building official.

R103.2.2.1 Request for review. Any person affected by a notice of violation issued pursuant to Section R103.2 may obtain a review of the notice by making a request in writing within ten days after service of the notice. When the last day of the period computed is a Saturday, Sunday, or City holiday, the period runs until 5 p.m. of the next business day.

R103.2.2.2 Review procedure. The review shall occur not less than ten nor more than 20 days after the request is received by the building official unless otherwise agreed to by the person requesting the review. Any person affected by the notice of violation may submit additional information to the building official. The review shall be made by a representative of the building official who will review any additional information that is submitted and the basis for issuance of the notice of violation. The reviewer may request clarification of the information received and may conduct a site visit.

R103.2.2.3 Decision. After the review, the building official shall:

1. Sustain the notice;
2. Withdraw the notice;
3. Continue the review to a date certain; or
4. Amend the notice.

R103.2.2.4 Order. The building official shall issue an order containing the decision within 15 days of the date that the review is completed and shall cause the order to be

1 mailed by regular first class mail to the persons requesting the review and the persons
2 named on the notice of violation, addressed to their last known address.

3 **R103.3 Stop work orders.** The building official may issue a stop work order whenever any work
4 is being done contrary to the provisions of this code, or in the event of dangerous or unsafe
5 conditions related to construction or demolition. The stop work order shall identify the violation
6 and may prohibit work or other activity on the site.
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8 **R103.3.1 Service of stop work order.** The building official may serve the stop work order
9 by posting it in a conspicuous place at the site, if posting is physically possible. If posting is
10 not physically possible, then the stop work order may be served in the manner set forth in the
11 Revised Code of Washington (RCW) 4.28.080 for service of a summons or by sending it by
12 first class mail to the last known address of: the property owner, the person doing or causing
13 the work to be done, or the holder of a permit if work is being stopped on a permit. For
14 purposes of this section, service is complete at the time of posting or of personal service, or if
15 mailed, three days after the date of mailing. When the last day of the period so computed is a
16 Saturday, Sunday or city holiday, the period runs until 5 p.m. on the next business day.
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20 **R103.3.2 Effective date of stop work order.** Stop work orders are effective when posted, or
21 if posting is not physically possible, when one of the persons identified in Section R103.3.1 is
22 served or, if notice is mailed, three days after the date of mailing.
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24 **R103.3.3 Review of stop work orders by the building official.**
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1 **R103.3.3.1 Request for review.** Any person aggrieved by a stop work order may obtain a
2 review of the order by delivering to the building official a request in writing within two
3 business days of the date of service of the stop work order.

4 **R103.3.3.2 Review procedure.** The review shall occur within two business days after
5 receipt by the building official of the request for review unless the requestor agrees to a
6 longer time. Any person affected by the stop work order may submit additional
7 information to the building official for consideration as part of the review at any time prior
8 to the review. The review will be made by a representative of the building official who
9 will review all additional information received and may conduct a site visit.
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11 **R103.3.3.3 Decision.** After the review, the building official may:
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- 13 a. Sustain the stop work order;
14 b. Withdraw the stop work order;
15 c. Amend the stop work order; or
16 d. Continue the review to a date certain.
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20 **R103.3.3.4 Order.** The building official shall issue an order of the building official
21 containing the decision within two business days after the review and shall cause the order
22 to be sent by first class mail to the person or persons requesting the review, any person on
23 whom the stop work order was served, and any other person who requested a copy before
24 issuance of the order.
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1 **R103.4 Occupancy violations.** Whenever any building or structure is being occupied contrary to
2 the provisions of this code, the building official may order such occupancy discontinued and the
3 building or structure, or portion thereof, vacated by notice.

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5 **R103.4.1 Service of notice of occupancy violation.** The notice shall be served by personal
6 service or regular first class mail addressed to the last known address of the occupant of the
7 premises or any person causing such occupancy. If no address is available after reasonable
8 inquiry, the notice may be served by posting it in a conspicuous place on the premises.

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10 **R103.4.2 Compliance with notice of occupancy violation.** Any person occupying the
11 building or structure shall discontinue the occupancy by the date specified in the notice of the
12 building official, or shall make the building or structure, or portion thereof, comply with the
13 requirements of this code; provided, however, that in the event of an unsafe building, Section
14 102 may apply.
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16 **R103.5 Civil penalties.** Any person violating or failing to comply with the provisions of this
17 code shall be subject to a cumulative civil penalty in an amount not to exceed \$500 per day for
18 each violation from the date the violation occurs or begins until compliance is achieved. In cases
19 where the building official has issued a notice of violation, the violation will be deemed to begin,
20 for purposes of determining the number of days of violation, on the date compliance is required
21 by the notice of violation.
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23 **R103.6 Enforcement in Municipal Court.** Civil actions to enforce this chapter shall be brought
24 exclusively in Seattle Municipal Court, except as otherwise required by law or court rule. In any
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1 civil action for a penalty, the City has the burden of proving by a preponderance of the evidence
2 that a violation exists or existed; the issuance of the notice of violation or of an order following a
3 review by the building official is not itself evidence that a violation exists.

4 **R103.7 Judicial review.** Because civil actions to enforce Seattle Municipal Code (SMC) Title
5 22 must be brought exclusively in Seattle Municipal Court pursuant to Section R103.6, orders of
6 the building official including notices of violation issued under this chapter are not subject to
7 judicial review pursuant to Chapter 36.70C RCW.
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9 **R103.8 Alternative criminal penalty.** Anyone who violates or fails to comply with any notice
10 of violation or order issued by the building official pursuant to this code or who removes,
11 mutilates, destroys or conceals a notice issued or posted by the building official shall, upon
12 conviction thereof, be punished by a fine of not more than \$5000 or by imprisonment for not
13 more than 365 days, or by both such fine and imprisonment for each separate violation. Each
14 day's violation shall constitute a separate offense.
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16 **R103.9 Additional relief.** The building official may seek legal or equitable relief to enjoin any
17 acts or practices and abate any condition when necessary to achieve compliance.
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19 **R103.10 Administrative Review.**
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21 **R103.10.1 Administrative review by the building official.** Applicants may request
22 administrative review by the building official of decisions or actions pertaining to the
23 administration and enforcement of this code. Requests shall be addressed to the building
24 official.
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R103.10.2 Administrative review by the Construction Codes Advisory Board.

Applicants may request review of decisions or actions pertaining to the application and interpretation of this code by the Construction Codes Advisory Board (CCAB), except for stop work orders, notices of violations and revocations of permits. The review will be performed by a panel of three or more members of the Construction Codes Advisory Board, chosen by the Board Chair. The Chair shall consider the subject of the review and members' expertise when selecting members to conduct a review. The decision of the review panel is advisory only; the final decision is made by the building official.

R103.11 Recording of notices. The building official may record a copy of any order or notice with the Department of Records and Elections of King County

R103.12 Appeal to Superior Court. Final decisions of the Seattle Municipal Court on enforcement actions authorized by Title 22 may be appealed pursuant to the Rules for Appeal of Decisions of Courts of Limited Jurisdiction.

SECTION R104

ORGANIZATION AND DUTIES

R104.1 Jurisdiction of Department of Planning and Development. The Department of Planning and Development is authorized to administer and enforce this code. The Department of Planning and Development is under the administrative and operational control of the Director, who is the building official.

1 **R104.2 Designees.** The building official may appoint such officers, inspectors, assistants and
2 employees as shall be authorized from time to time. The building official may authorize such
3 employees and other agents as may be necessary to carry out the functions of the building
4 official.

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6 **R104.3 Right of entry.** With the consent of the owner or occupier of a building or premises, or
7 pursuant to a lawfully issued warrant, the building official may enter a building or premises at
8 any reasonable time to perform the duties imposed by this code.

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10 **R104.4 Modifications.** The building official may modify the requirements of this code for
11 individual cases provided the building official finds: 1) there are practical difficulties involved in
12 carrying out the provisions of this code; 2) the modification is in conformity with the intent and
13 purpose of this code; and 3) the modification will provide a reasonable level of strength,
14 effectiveness, fire resistance, durability, safety and sanitation when considered together with
15 other safety features of the building or other relevant circumstances. The building official may,
16 but is not required to, record the approval of modifications and any relevant information in the
17 files of the building official or on the approved construction documents.

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19 **R104.5 Alternate materials, methods of construction and design.** This code does not prevent
20 the use of any material, design or method of construction not specifically allowed or prohibited
21 by this code, provided the alternate has been approved and its use authorized by the building
22 official. The building official may approve an alternate, provided the building official finds that
23 the proposed alternate complies with the provisions of this code and that the alternate, when
24 considered together with other safety features of the building or other relevant circumstances,
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1 will provide at least an equivalent level of strength, effectiveness, fire resistance, durability,
2 safety and sanitation. Certain code alternates have been pre-approved by the building official and
3 are identified in this code as code alternates. The building official may require that sufficient
4 evidence or proof be submitted to reasonably substantiate any claims regarding the use or
5 suitability of the alternate. The building official may, but is not required to, record the approval
6 of alternates and any relevant information in the files of the building official or on the approved
7 construction documents.
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9 **R104.6 Tests.** Whenever there is insufficient evidence of compliance with any of the provisions
10 of this code or evidence that any material or construction does not conform to the requirements
11 of this code, the building official may require tests as proof of compliance to be made at no
12 expense to the City. Test methods shall be specified by this code or by other recognized test
13 standards. If there are no recognized and accepted test methods for the proposed alternate, the
14 building official shall determine the test procedures. All tests shall be made by an approved
15 agency. Reports of such tests shall be retained by the building official for the period required for
16 retention of public records.
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19 **R104.7 Rules of the building official.**

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21 **R104.7.1 Authority.** The building official has authority to issue interpretations of this code
22 and to adopt and enforce rules and regulations supplemental to this code as may be deemed
23 necessary in order to clarify the application of the provisions of this code. Such
24 interpretations, rules and regulations shall be in conformity with the intent and purpose of
25 this code.
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1 **R104.7.2 Procedure.** The building official shall promulgate, adopt and issue rules according
2 to the procedures specified in the Administrative Code, Chapter 3.02 of the Seattle Municipal
3 Code.

4 **R104.8 Liability.**

5 **R104.8.1** Nothing in this code is intended to be nor shall be construed to create or form the
6 basis for any liability on the part of the City, or its officers, employees or agents, for any
7 injury or damage resulting from the failure of a building to conform to the provisions of this
8 code, or by reason or as a consequence of any inspection, notice, order, certificate, permission
9 or approval authorized or issued or done in connection with the implementation or
10 enforcement of this code, or by reason of any action or inaction on the part of the City related
11 in any manner to the enforcement of this code by its officers, employees or agents.

12 **R104.8.2** This code shall not be construed to relieve or lessen the responsibility of any person
13 owning, operating or controlling any building or structure for any damages to persons or
14 property caused by defects, nor shall the Department of Planning and Development or the
15 City of Seattle be held to have assumed any such liability by reason of the inspections
16 authorized by this code or any permits or certificates issued under this code.

17 **R104.9 Responsibilities of parties.**

18 **R104.9.1 Responsibility for compliance.** Compliance with the requirements of this code is
19 the obligation of the owner of the building, structure, or premises; the duly authorized agent
20 of the owner; and other persons responsible for the condition or work, and not of the City or
21 any of its officers, employees or agents.

R104.9.2 Responsibility of design professional, contractor, plans examiner and

inspector. The responsibilities of the design professional in responsible charge, contractor, plans examiner, and field inspector are as provided in the *International Building Code* Section R101.3.1.

SECTION R105

BUILDING PERMITS

R105.1 Permits required. Except as otherwise specifically provided in this code, a building permit shall be obtained from the building official for each building or structure prior to erecting, constructing, enlarging, altering, repairing, moving, improving, removing, changing the occupancy of, or demolishing such building or structure, or allowing the same to be done. All work shall comply with this code, even where no permit is required.

R105.2 Work exempt from permit. A building permit is not required for the work listed below. Exemption from the permit requirements of this code does not authorize any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of the City.

1. Minor repairs or alterations that, as determined by the building official, cost the owner \$4,000 or less in any six month period. Such repairs and alterations shall not include the removal, reduction, alteration or relocation of any loadbearing support. Egress, light, ventilation and fire-resistance shall not be reduced without a permit.

2. Minor work including the following, provided no changes are made to the building envelope: patio and concrete slabs on grade; painting or cleaning a building; repointing a chimney; installing kitchen cabinets, paneling or other surface finishes over existing wall and ceiling

1 systems; insulating existing buildings; abatement of hazardous materials; and in-kind or similar
2 replacement of or repair of deteriorated members of a structure.

3 3. One-story detached accessory buildings used for greenhouse, tool or storage shed, playhouse,
4 or similar uses, if:

5 3.1. The projected roof area does not exceed 120 square feet; and

6 3.2. The building is not placed on a concrete foundation other than a slab on grade.

7 4. Fences not over 8 feet high that do not have masonry or concrete elements above 6 feet.

8 5. Arbors and other open-framed landscape structures not exceeding 120 square feet in projected
9 area.

10 6. Retaining walls and rockeries which are not over 4 feet in height measured from the bottom of
11 the footing to the top of the wall, if:

12 6.1. There is no surcharge or impoundment of Class I, II or III-A liquids;

13 6.2. The wall or rockery is not located in an Environmentally Critical Area (ECA) or ECA
14 buffer pursuant to chapter 25.09 of the Seattle Municipal Code;

15 6.3. Construction does not support soils in a steep slope area, potential landslide area or
16 known slide area as identified in the Seattle Environmentally Critical Areas Ordinance,
17 Section 25.09.020 of the Seattle Municipal Code.

18 6.4. Possible failure would likely cause no damage to adjoining property or structures.

19 7. Platforms, walks and driveways not more than 18 inches above grade and not over any
20 basement or story below.

1 8. Window awnings supported by an exterior wall when projecting not more than 54 inches.

2 9. Prefabricated swimming pools, spas and similar equipment accessory to a building subject to
3 this code in which the pool walls are entirely above the adjacent grade and if the capacity does
4 not exceed 5,000 gallons.

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6 10. Replacement of roofing materials and siding. This shall not include structural changes,
7 replacement of sheathing or alterations to doors and windows. See Energy Code Sections
8 101.3.2.5 and 1132.1 for insulation requirements for existing buildings.

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10 **Exception:** In detached one- and two- family dwellings, the existing roof sheathing may be
11 replaced and roof structure may be repaired without permit provided no changes are made to
12 the building envelope other than adding or replacing insulation, and the work is equivalent to
13 or better than the existing structure.

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15 11. Private playground equipment including tree houses.

16 12. Removal and/or replacement of underground storage tanks that are subject to regulation by a
17 state or federal agency.

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19 **Note:** A Fire Department permit is required for removal, replacement and decommissioning of
20 underground storage tanks.

21 13. Installation of dish and panel antennas 6.56 feet (2 m) or less in diameter or diagonal
22 measurement.

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24 14. Portable heating appliances, portable ventilating equipment and portable cooling units,
25 provided that the total capacity of these portable appliances does not exceed 40 percent of the
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1 cumulative heating, cooling or ventilating requirements of a building or dwelling unit and does
2 not exceed 3 kW or 10,000 Btu input.

3 15. Any closed system of steam, hot or chilled water piping within heating or cooling equipment
4 regulated by this code.

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6 16. Minor work or the replacement of any component part of a mechanical system that does not
7 alter its original approval and complies with other applicable requirements of this code.

8 **R105.3 Other permits required.** Unless otherwise exempted by this or other pertinent codes,
9 master use, plumbing, electrical, mechanical and other permits may be required for the above
10 exempted items.

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12 **R105.4 Flood hazard areas.** In addition to the permit required by this section, all work to be
13 performed in areas of special flood hazard, as defined in Chapter 25.06 of the Seattle Municipal
14 Code are subject to additional standards and requirements, including floodplain development
15 approval or a Floodplain Development License, as set forth in Chapter 25.06, the Seattle
16 Floodplain Development Ordinance.

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18 **R105.5 Application for permit.**

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20 **R105.5.1 Application.** To obtain a permit, the applicant shall first file an application in
21 writing on a form furnished by the building official or in another format determined by the
22 building official. Every such application shall:

- 23 1. Identify and describe the work to be covered by the permit for which application is made.
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1 2. Describe the land on which the proposed work is to be done by legal description, property
2 address or similar description that will readily identify and definitely locate the proposed
3 building or work.

4 3. Provide the contractor's business name, address, phone number and current contractor
5 registration number (required if contractor has been selected).
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7 4. Be accompanied by construction documents, including plans and other data required in
8 Section R105.5.2.

9 5. State the valuation of any new building or structure or any addition, remodeling or
10 alteration to an existing building, including cost breakdown between additions and
11 alterations.
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13 6. Be signed by the owner of the property or building, or the owner's authorized agent, who
14 may be required to submit evidence to indicate such authority.
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16 7. Give such other data and information as may be required by the building official,
17 including, but not limited to, master use and shoreline permits and building identification
18 plans.
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20 8. Indicate the name of the owner and contractor and the name, address and phone number of
21 a contact person.

22 9. Substantially conform with the Land Use Code, critical areas regulations and *Seattle*
23 *Residential Code* regulations in effect on the date that the application is submitted.
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1 10. Applications that include a grading component shall include all information prescribed by
2 the Grading Code and rules adopted thereunder, and all additional information required by
3 the building official pursuant to the Grading Code and rules adopted thereunder.

4 **R105.5.2 Construction documents.**

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6 **R105.5.2.1 General.** Construction documents shall be submitted in two or more sets with
7 each application for a permit, or shall be submitted in electronic format determined by the
8 building official. Computations, stress diagrams, shop and fabrication drawings and other
9 data sufficient to show the adequacy of the plans shall be submitted when required by the
10 building official.
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12 **Exception:** The building official may waive the submission of construction documents if
13 the building official finds that the nature of the work applied for is such that reviewing of
14 construction documents is not necessary to obtain compliance with this code.
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16 **R105.5.2.2 Preparation by registered design professionals.** Construction documents
17 for all work shall be prepared and designed by or under the direct supervision of an
18 architect or structural engineer licensed to practice under the laws of the State of
19 Washington. Each sheet of construction documents shall bear the seal and the signature of
20 the registered design professional before the permit is issued.
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22 **Exceptions:**
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1 1. When authorized by the building official, construction documents need not be
2 prepared by an engineer or architect licensed by the State of Washington for the
3 following:

4 1.1. Detached one- and two-family dwellings.

5 1.2. New buildings or structures, and additions, alterations or repairs made to them of
6 wood light-frame construction, having a total valuation of less than \$30,000.

7 1.3. Nonstructural alterations and repairs having a total valuation of less than \$30,000,
8 excluding the value of electrical and mechanical systems, fixtures, equipment, interior
9 finish and millwork.

10 1.4. Other work as specified in rules promulgated by the building official.

11
12 2. When authorized by the building official, construction documents for assembly line
13 products or designed specialty structural products may be designed by a registered
14 professional engineer.

15
16
17
18 **Interpretation R105.5.2.2:** Steel moment frames or extensive or more complex concrete
19 structures such as concrete frame, mild reinforced or post-tensioned floor slabs, shall be
20 designed by a licensed structural engineer.

21 **R105.5.2.3 Information required on construction documents.** Construction documents
22 shall include the following, as applicable:

23 1. A plot plan showing the width of streets, alleys, yards and courts.

1 2. The location (and/or location within a building), floor area, story, height and use
2 defined by the Land Use Code of the proposed building and of every existing building on
3 the property.

4 3. Where there are more than two buildings located on a property, a building
5 identification plan identifying the location of each building on the property and
6 identifying each building by a numbering system unrelated to address. Such plan is not
7 required where a plan for the site is already on file and no new buildings are being added
8 to the site.

9 4. Types of heating and air conditioning systems.

10 5. Architectural plans, including floor plans, elevations and door and finish schedules
11 showing location of all doors, windows, mechanical equipment, shafts, pipes, vents and
12 ducts.

13 6. Structural plans, including foundation plan and framing plans.

14 7. Cross-sections and construction details for both architectural and structural plans,
15 including wall sections, foundation, floor and roof details, connections of structural
16 members and types of construction material.

17 8. Topographic plans, including original and final contours, location of all buildings and
18 structures on the site and, when required by the building official, adjacent to the site, and
19 cubic yards of cut and fill.

1 9. If the building official has reason to believe that there may be an intrusion into required
2 open areas or over the property line, a survey of the property prepared by a land surveyor
3 licensed by the State of Washington is required for all new construction, and for additions
4 or accessory buildings.

5 10. If any building or structure is to be erected or constructed on property abutting an
6 unimproved or partially improved street or alley, the plans shall also include a profile
7 showing the established or proposed grade of the street or alley, based upon information
8 obtained from the Director of Transportation relating to the proposed finished elevations
9 of the property and improvements thereon.
10

11
12 **R105.5.2.4 Information on first sheet.** The first or general note sheet of each set of
13 plans shall specify the following, as applicable:

- 14 1. The building and street address of the work.
15
16 2. The name and address of the owner and person who prepared the plans.
17
18 3. Legal description of the property.
19
20 4. Type of occupancy of all parts of the building as defined in this code, including
21 notation of fixed fire protection devices or systems.
22
23 5. Zoning classification of the property and existing and proposed uses of the structure(s)
24 as defined in the *Land Use Code*.
25
26 6. Number of stories above grade and the number of basements as defined in this code.
27
28

1 7. Variances, conditional uses, special exceptions, including project numbers, approval
2 and approval extension dates.

3 **R105.5.2.5 Structural notes.** Plans shall include applicable information including, but
4 not limited to, the following:

5
6 1. Design loads: Snow load, live loads and lateral loads. If required by the building
7 official, the structural notes for plans engineered to Chapter 9 of ASCE 7 shall include the
8 factors of the base shear formula used in the design;

9
10 2. Foundations: Foundation investigations, allowable bearing pressure for spread
11 footings, allowable load capacity of piles, lateral earth pressure;

12 3. Masonry: Type and strength of units, strength or proportions of mortar and grout, type
13 and strength of reinforcement, method of testing, design strength;

14
15 4. Wood: Species or species groups, and grades of sawn lumber, glued-laminated lumber,
16 plywood and assemblies, type of fasteners;

17 5. Concrete: Design strengths, mix designs, type and strength of reinforcing steel, welding
18 of reinforcing steel, restrictions, if any;

19
20 6. Steel and aluminum: Specification types, grades and strengths, welding electrode types
21 and strengths; and

22 7. Statement of special inspections as required by *Seattle Building Code* Chapter 17.

23
24 In lieu of detailed structural notes, the building official may approve minor references
25 on the plans to a specific section or part of this code or other ordinances or laws.

R106.5.3 Deferred submittals. Deferral of any submittal items shall have the prior approval of the *building official*. The *registered design professional in responsible charge* shall list *deferred submittals* on the *plans* for review by the *building official*.

Documents for *deferred submittal* items shall be submitted to the *registered design professional in responsible charge* who shall review them and forward them to the *building official* with a notation indicating that the *deferred submittal* documents have been reviewed and been found to be in general conformance to the design of the building. The *deferred submittal* items shall not be installed until the *deferred submittal* documents have been approved by the *building official*.

R105.5.4 Clarity of plans. Plans shall be drawn to a clearly indicated and commonly accepted scale upon substantial paper such as blueprint quality or standard drafting paper. Tissue paper, posterboard or cardboard will not be accepted. The plans shall be of microfilm quality and limited to a minimum size of 18 inches by 18 inches (457 mm by 457 mm) and a maximum size of 41 inches by 54 inches (1041 mm by 1372 mm).

Exceptions:

1. The plans for metal-plate-connected wood trusses may be not less than 8 1/2 inches by 11 inches for detached single family structures and no less than 11 inches by 17 inches for all other structures.
2. Plans may be submitted in electronic format as determined by the building official.

R105.6 Application review and permit issuance.

1 **R105.6.1 General.** The construction documents shall be reviewed by the building official.

2 Such construction documents may be reviewed by other departments of the City to check
3 compliance with the laws and ordinances under their jurisdiction.

4 **R105.6.2 Determination of completeness.** Within 28 days after an application is filed, the
5 building official shall notify the applicant in writing either that the application is complete or
6 that it is not complete, and if not complete, what additional information is required to make it
7 complete. Within 14 days after receiving the additional information, the building official
8 shall notify the applicant in writing whether the application is now complete or what
9 additional information is necessary. An application shall be deemed to be complete if the
10 building official does not notify the applicant in writing by the deadlines in this section that
11 the application is incomplete.

12 **R105.6.3 Decision and issuance of permit.**

13 **R105.6.3.1 Decision on application.** Except as provided in Section R105.6.7, the building
14 official shall approve, condition or deny the application within 120 days after the building
15 official notifies the applicant that the application is complete.

16 To determine the number of days that have elapsed after the notification that the
17 application is complete, the following periods shall be excluded:

18 1. All periods of time during which the applicant has been requested by the Director to
19 correct plans, perform required studies, or provide additional required information, until the
20 determination that the request has been satisfied. The period shall be calculated from the date

1 the building official notifies the applicant of the need for additional information until the earlier
2 of the date the building official determines whether the additional information satisfies the
3 request for information or 14 days after the date the information has been provided to the
4 building official.

5 2. If the building official determines that the information submitted by the applicant under
6 item 1 of this subsection is insufficient, the building official shall notify the applicant of the
7 deficiencies, and the procedures under item 1 of this subsection shall apply as if a new request for
8 information had been made;
9

10 3. All extensions of time mutually agreed upon by the applicant and the building official.

11 If a project permit application is substantially revised by the applicant the time period shall
12 start from the date at which the revised project application is determined to be complete
13 under Section R101.3.1
14

15 **R105.6.3.2 Issuance of permit.** The building official shall issue a permit to the applicant if
16 the building official finds that the work as described in the construction documents satisfies
17 the following:
18

19 1. It conforms to the requirements of this code and other pertinent laws, ordinances and
20 regulations and with all conditions imposed under any of them,
21

22 2. The fees specified in the Fee Subtitle have been paid, and

23 3. The applicant has complied with all requirements to be performed prior to issuance of a
24 permit for the work under other pertinent laws, ordinances or regulations or included in a
25 master use permit, or otherwise imposed by the building official
26

1 When the permit is issued, the applicant or the applicant's authorized agent becomes the
2 permit holder.

3 **R105.6.4 Permit conditions and denial.** The building official may impose on a permit any
4 conditions authorized by this code or other pertinent ordinances or regulations, including
5 without limitation the Grading Code, the Stormwater and Drainage Control Code,
6 Regulations for Environmentally Critical Areas, and rules adopted under any of them. In
7 addition, the building official may condition a permit in order to reduce the risks associated
8 with development, construction, ownership and occupancy including, but not limited to risks
9 in potential slide areas. The building official may deny permit if the building official
10 determines that the risks cannot be reduced to an acceptable level; or if the proposed project
11 or construction documents do not conform to the requirements of this code or those of other
12 pertinent laws, ordinances or regulations, or do not conform to requirements included the
13 Master Use Permit or otherwise imposed by the building official or other City department; or
14 if the applicant fails to comply with any requirement or condition under any of the foregoing.
15

16
17
18 **R105.6.5 Compliance with approved construction documents.** When the building official
19 issues a permit, the building official shall endorse the permit in writing or in electronic
20 format and stamp the plans APPROVED. Such approved plans and permit shall not be
21 changed, modified or altered without authorization from the building official, and all work
22 shall be done in accordance with the approved construction documents and permit except as
23 the building official may require during field inspection to correct errors or omissions.
24
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1 **Exception:** Approval of the building official is not required for modifications to approved
2 construction documents when the scope of work proposed in the modifications would not
3 require a permit.

4 **R105.6.6 Amendments to the permit.** When changes to the approved work are made during
5 construction, approval of the building official shall be obtained prior to execution. The
6 building inspector may approve minor changes to the construction documents for work not
7 reducing the structural strength or fire and life safety of the structure. The building inspector
8 shall determine if it is necessary to revise the approved construction documents. Changes
9 shall be shown on two sets of plans that shall be submitted to and approved by the building
10 official, accompanied by fees specified in the Fee Subtitle prior to occupancy. All changes
11 shall conform to the requirements of this code and other pertinent laws and ordinances.

12 **R105.6.7 Cancellation of permit applications.** Applications may be cancelled if no permit
13 is issued by the earlier of the following: 1) twelve months following the date of application;
14 or 2) sixty days from the date of written notice that the permit is ready to issue. After
15 cancellation, construction documents submitted for review may be returned to the applicant
16 or destroyed by the building official.

17 The building official will notify the applicant in writing at least 30 days before the
18 application is cancelled. The notice shall specify a date by which a request for extension must
19 be submitted in order to avoid cancellation. The date shall be at least two weeks prior to the
20 date on which the application will be cancelled.

21 **R105.6.8 Extensions prior to permit issuance.**

1 **R105.6.8.1** At the discretion of the building official, applications for projects that require
2 more than 12 months to review and approve may be extended for a period that provides
3 reasonable time to complete the review and approval, but in no case longer than 24
4 months from the date of the original application. No application may be extended more
5 than once. After cancellation, the applicant shall submit a new application and pay a new
6 fee to restart the permit process.

7
8 **R105.6.8.2** Notwithstanding other provisions of this code, an application may be
9 extended where issuance of the permit is delayed by litigation, preparation of
10 environmental impact statements, appeals, strikes or other causes related to the
11 application that are beyond the applicant's control, or while the applicant is making
12 progress toward issuance of a master use permit.

13
14 **R105.7 Retention of plans.** One set of approved plans, which may be on microfilm or in
15 electronic format, shall be retained by the building official. One set of approved plans shall be
16 returned to the applicant and shall be kept at the site of the building or work for use by the
17 inspection personnel at all times during which the work authorized is in progress.

18
19 **R105.8 Validity of permit.** The issuance or granting of a permit or approval of construction
20 documents shall:

- 21
22 1. not be construed to be a permit for, or an approval of, any violation of any of the
23 provisions of this code or other pertinent laws and ordinances;

2. not prevent the building official from requiring the correction of errors in the construction documents or from preventing building operations being carried on thereunder when in violation of this code or of other pertinent laws and ordinances of the City;

3. not prevent the building official from requiring correction of conditions found to be in violation of this code or other pertinent laws and ordinances of the City; or

4. not be construed to extend the period of time for which any such permit is issued or otherwise affect any period of time for compliance specified in any notice or order issued by the building official or other administrative authority requiring the correction of any such conditions.

R105.9 Expiration of permits. Authority to do the work authorized by a permit or a renewed permit expires 18 months from the date of issuance.

Exceptions:

1. Initial permits for major construction projects that require more than 18 months to complete, according to a construction schedule submitted by the applicant, may be issued for a period that provides reasonable time to complete the work but in no case longer than three years.

2. The building official may issue permits which expire in less than 18 months if the building official determines a shorter period is appropriate to complete the work.

R105.10 Renewal of permits. Permits may be renewed and renewed permits may be further renewed by the building official if the following conditions are met:

1 1. Application for renewal is made within the 30 day period immediately preceding the date of
2 expiration of the permit; and

3 2. If the project has had an associated discretionary Land Use review, and the land use approval
4 has not expired per Seattle Municipal Code 23.76. 032; and

5
6 3. If an application for renewal is made either more than eighteen months after the date of
7 mandatory compliance with a new or revised edition of the *Seattle Residential Code* or after the
8 effective date of an amendment to applicable provisions of the *Land Use Code* or the
9 Environmentally Critical Areas Ordinance (Chapter 25.09 of the Seattle Municipal Code), the
10 permit shall not be renewed unless:

11
12 3.1. The building official determines that the permit complies, or is modified to comply, with
13 the code or codes in effect on the date of application renewal; or

14
15 3.2. The work authorized by the permit is substantially underway and progressing at a rate
16 approved by the building official. "Substantially underway" means that work such as
17 excavation, inspections and installation of framing, electrical, mechanical and finish work is
18 being completed on a continuing basis; and

19
20 4. Commencement or completion of the work authorized by the permit is delayed by litigation,
21 appeals, strikes or other causes related to the work authorized by the permit that are beyond the
22 permit holder's control if application for renewal is made within the 30 day period immediately
23 preceding the date of expiration of the permit.

24
25 **R105.11 Reestablishment.** A new permit is required to complete work if a permit has expired
26 and was not renewed.

Exception: A permit that expired less than one year prior to the date of a request for reestablishment may be reestablished upon approval of the building official, if it complies with Section R105.10, Items 2 and 3 or Item 4 above.

R105.12 Revocation of building permits.

R105.12.1 Notice of revocation. Whenever the building official determines there are grounds for revoking a permit, the building official may issue a notice of revocation. The notice of revocation shall identify the reason for the proposed revocation, including but not limited to the violations, the conditions violated and any alleged false or misleading information provided.

R105.12.2 Standards for revocation. The building official may revoke a permit if:

1. The code or the building permit has been or is being violated and issuance of a notice of violation or stop work order has been or would be ineffective to secure compliance because of circumstances related to the violation; or
2. The permit was obtained with false or misleading information.

R105.12.3 Service of notice of revocation. The notice of revocation shall be served on the owner of the property on which the work is occurring, the holder of a permit if different than the owner, or the person doing or causing the work to be done. The notice of revocation shall be served in the manner set forth in RCW 4.28.080 for service of a summons or sent by first class mail to the last known address of the responsible party. For purposes of this section, service is complete at the time of personal service, or if mailed, three days after the date of

mailing. When the last day of the period so computed is a Saturday, Sunday or City holiday, the period runs until 5 p.m. on the next business day.

R105.12.4 Effective date of revocation. The building official shall identify in the notice of revocation a date certain on which the revocation will take effect. This date may be stayed pending complete review before the building official pursuant to Section R105.12.5.

R105.12.5 Review by the building official for notice of revocation.

R105.12.5.1 Request for review. Any person aggrieved by a notice of revocation may obtain a review by making a request in writing to the building official within three business days of the date of service of the notice of revocation. The review shall occur within five business days after receipt by the building official of the request for review.

Any person affected by the notice of revocation may submit additional information to the building official for consideration as part of the review at any time prior to the review.

R105.12.5.2 Conduct of review. The review will be made by a representative of the building official who will review all additional information received and may also request a site visit. After the review, the building official may:

1. Sustain the notice of revocation
2. Withdraw the notice of revocation;
3. Modify the notice of revocation; or
4. Continue the review to a date certain.

1 **R105.12.5.3 Order of revocation of permit.** The building official shall issue an order of
2 the building official containing the decision within ten days after the review and shall
3 cause the same to be sent by first class mail to the person or persons requesting the
4 review, any other person on whom the notice of revocation was served and any other
5 person who requested a copy before issuance of the order.
6

7 **SECTION R106**

8 **INSPECTIONS**

9
10 **R106.1 General.** All construction or work for which a permit is required is subject to inspection
11 by the building official, and certain types of construction shall have special inspections by
12 registered special inspectors as specified in the *Seattle Building Code* Chapter 17.

13 **R106.2 Surveys.** A survey of the lot may be required by the building official to verify
14 compliance of the structure with approved construction documents.
15

16 **R106.3 Inspection requests.** The owner of the property or the owner's authorized agent, or the
17 person designated by the owner/agent to do the work authorized by a permit shall notify the
18 building official that work requiring inspection as specified in this section is ready for inspection.
19

20 **R106.4 Access for inspection.** The permit holder and the person requesting any inspections
21 required by this code shall provide access to and means for proper inspection of such work,
22 including safety equipment required by the Washington Industrial Safety and Health Agency. The
23 work shall remain accessible and exposed for inspection purposes until approved by the building
24

1 official. Neither the building official nor the City is liable for expense entailed in the required
2 removal or replacement of any material to allow inspection.

3 **R106.5 Inspection record.** Work requiring a permit shall not be commenced until the permit
4 holder or the permit holder's agent has posted an inspection record in a conspicuous place on the
5 premises and in a position that allows the building official to conveniently make the required
6 entries regarding inspection of the work. This record shall be maintained in such a position by the
7 permit holder or the permit holder's agent until final approval has been granted by the building
8 official.
9

10
11 **R106.6 Approvals required.** No work shall be done on any part of the building or structure
12 beyond the point indicated in each successive inspection without first obtaining the written
13 approval of the building official. Written approval shall be given only after an inspection has
14 been made of each successive step in the construction as indicated by each of the inspections
15 required in Section R106.8. There shall be a final inspection and approval of all buildings when
16 they are completed and ready for occupancy.
17

18 **R106.6.1 Effect of approval.** Approval as a result of an inspection is not approval of any
19 violation of the provisions of this code or of other pertinent laws and ordinances of the City.
20 Inspections presuming to give authority to violate or cancel the provisions of this code or of
21 other pertinent laws and ordinances of the City are not valid.
22

23 **R106.7 Concealment of work.** No required reinforcing steel or structural framework of any part
24 of a building or structure shall be covered or concealed in any manner whatsoever without first
25 obtaining the approval of the building official.
26

Exception: Modular homes and commercial coaches identified by State of Washington stickers specified in Section 106.13.3 of the *International Building Code* and placed upon a permanent foundation approved and inspected by the building official.

R106.8 Required inspections. The building official, upon notification by the permit holder or the permit holder's agent, of the property address and permit number, shall make the following inspections and shall either approve that portion of the construction as completed or shall notify the permit holder or the permit holder's agent if the construction fails to comply with the law.

R106.8.1 First ground disturbance inspection. To be made prior to beginning land-disturbing activity, and following installation of erosion control measures and any required fencing that may restrict land disturbance in steep slope or other buffers as defined in chapter 25.09 of the Seattle Municipal Code.

Note: The purpose of this inspection is to verify the erosion control method, location and proper installation. Approved drainage plan requirements and site plan conditions will also be verified, including buffer delineations.

R106.8.2 Foundation inspection. To be made after trenches are excavated and forms erected and when all materials for the foundation are delivered on the job. Where concrete from a central mixing plant (commonly termed "ready mix") is to be used, materials need not be on the job.

R106.8.3 Concrete slab or under-floor inspection. To be made after all in-slab or under-floor building service equipment, conduit, piping accessories and other ancillary equipment

1 items are in place but before any concrete is poured or floor sheathing installed, including the
2 subfloor.

3 **R106.8.4 Frame inspection.** To be made after the roof, all framing, fire-blocking and
4 bracing are in place and all pipes, chimneys and vents are complete and the rough electrical,
5 plumbing and heating wires, pipes and ducts are approved.
6

7 **R106.8.5 Insulation inspection.** To be made after all insulation and vapor barriers are in
8 place but before any gypsum board or plaster is applied.
9

10 **R106.8.6 Lath and/or gypsum board inspection.** For shear walls, to be made after lathing
11 and/or gypsum board, interior and exterior, is in place, but before any plastering is applied or
12 before gypsum board joints and fasteners are taped and finished.
13

14 **R106.8.7 Final site inspection.** To be made after all grading is complete, and all permanent
15 erosion controls, stormwater facilities and stormwater best management practices have been
16 installed.
17

18 **Exception:** A final site inspection is not required for projects with less than 750 square feet
19 of land disturbing activity.
20

21 **R106.8.8 Final inspection.** To be made after finish grading and the building is completed
22 and before occupancy.
23

24 **R106.9 Other inspections.** In addition to the inspections specified above, the building official
25 may make or require any other inspections of any construction work or site work to ascertain
26
27
28

1 compliance with the provisions of this code and other pertinent laws and ordinances that are
2 enforced by the building official.

3 **R106.10 Special investigation.** If work that requires a permit or approval is commenced or
4 performed prior to making formal application and receiving the building official's permission to
5 proceed, the building official may make a special investigation inspection before a permit is
6 issued for such work. Where a special investigation is made, a special investigation fee may be
7 assessed in accordance with the Fee Subtitle.
8

9 **R106.11 Reinspections.** The building official may require a reinspection if work for which an
10 inspection is called is not complete, required corrections are not made, the inspection record is
11 not properly posted on the work site, the approved plans are not readily available to the inspector,
12 access is not provided on the date for which inspection is requested, or if deviations from
13 construction documents that require the approval of the building official have been made without
14 proper approval, or as otherwise required by the building official.
15
16

17 **R106.11.1 Compliance with Section R107.3.** For the purpose of determining compliance
18 with Section R107.3, Maintenance, the building official or the fire chief may cause a
19 structure to be reinspected.
20

21 **R106.11.2 Reinspection fee.** The building official may assess a reinspection fee as set forth
22 in the Fee Subtitle for any action listed above in section R106.11 for which reinspection is
23 required. In instances where reinspection fees have been assessed, no additional inspection
24 of the work will be performed until the required fees have been paid.
25
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R106.12 Approval for occupancy. Except for alterations and additions, no building or structure subject to this code shall be occupied until approved for occupancy after final inspection.

R106.12.1 Effect of Final inspection. Final inspection is not an approval of any violation of the provisions of this code or other pertinent laws and ordinances of the City. Certificates presuming to give authority to violate or cancel the provisions of this code or of other pertinent laws and ordinances of the City are not valid.

SECTION R107

EXISTING STRUCTURES AND EQUIPMENT

R107.1 General. Buildings in existence at the time of the passage of this code that were legally constructed and occupied in accordance with the provisions of a prior code may continue their existing use, if such use is not unsafe. Mechanical systems lawful at the time of the adoption of this code may continue and may be maintained or repaired, converted to another type of fuel or have components replaced if it is done in accordance with the basic original design and location and no hazard to life, health or property is created by such mechanical system.

R107.2 Establishing existing uses for the record. In order to establish an existing use for the record, the building shall comply with the fire and life safety requirements of this code or the code effective at the time the building was constructed. If the existing use is other than that for which the building was constructed, the building shall comply with this code or the code effective at the time the existing use was legally established.

R107.3 Maintenance. All buildings and structures, and all parts thereof, shall be maintained in a safe and sanitary condition. All mechanical systems, materials, equipment and appurtenances and all parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe and hazard-free condition. All devices or safeguards which are or were required by a code in effect when the building or structure was erected, altered or repaired shall be maintained in conformance with the code edition under which installed.

Exception: The building official is authorized to modify the requirements of this subsection where all or a portion of a building is unoccupied, closed off and reasonably secure from unlawful entry.

R107.3.1 Reinspection for maintenance. To determine compliance with this subsection, the building official may cause a mechanical system or equipment to be reinspected.

R107.3.2 Responsibility for maintenance. The owner or the owner's designated agent is responsible for maintenance of buildings, structures, mechanical systems, materials, equipment, devices, safeguards and appurtenances. It is a violation to fail to maintain such buildings, structures, mechanical systems, materials, equipment, devices, safeguards and appurtenances or to fail to immediately comply with any lawful notice or order of the building official

Exception: Occupants of dwellings are responsible for the maintenance of smoke alarms required by Section R314 and carbon monoxide alarms required by Section R315.

R107.4 Unsafe building appendages. Parapet walls, cornices, chimneys and other appendages or structural members that are supported by, attached to, or a part of a building and that are in a deteriorated condition or are otherwise unable to sustain the design loads specified in this code,

are hereby designated as unsafe building appendages. All such unsafe building appendages are public nuisances and shall be abated in accordance with Section R102 of this code.

R107.5 Additions, alterations or repairs.

R107.5.1 General. Buildings and structures to which additions, alterations or repairs are made shall comply with all the requirements of this code for new facilities except as specifically provided in this section. See also applicable provisions of the *Washington State Energy Code with Seattle Amendments*. Any building or addition that is not covered by or within the scope of this code as provided in Section R101.2 shall be designed to the provisions of the *International Building Code*.

Exception: An addition may be made to an existing nonconforming building if the following conditions are met:

1. A fire wall, constructed in compliance with *International Building Code* Section 706, separates the addition and the existing structure;
2. The existing building is not made more nonconforming; and
3. The addition conforms to this code.

R107.5.2 When allowed. Additions, alterations or repairs may be made to any existing building or structure without requiring the existing building or structure to comply with all the requirements of this code, if the addition, alteration or repair conforms to the standards required for a new building or structure and complies with Section R107.5.1. Additions, alterations, renovations or repairs may be made to any mechanical system without requiring

1 the existing mechanical system to comply with all the requirements of this code, if the
2 addition, alteration, renovation or repair conforms to the standards required for a new
3 mechanical system. Additions, alterations, renovations or repairs shall not cause an existing
4 system to become unsafe, unhealthy or overloaded.

5 Minor additions, alterations, renovations and repairs to existing mechanical systems may be
6 installed in accordance with the law in effect at the time the original installation was made, if
7 approved by the building official.
8

9 **R107.5.3 Impracticality.** In cases where compliance with the requirements of this code is
10 impractical, the applicant may arrange a presubmittal conference with the design team and
11 the building official. The applicant shall identify alternate design solutions and modifications
12 and demonstrate conformance to Section R104.4 or R104.5. The building official is
13 authorized to waive specific requirements in this code that the building official determines to
14 be impractical.
15
16

17 **R107.5.4 Compliance with retroactive ordinances.** Alterations and repairs to existing
18 buildings that are being made in response to a notice or order requiring compliance with the
19 *Housing and Building Maintenance Code*, Subtitle II, Title 22 of the Seattle Municipal Code,
20 the *Fire Code*, Subtitle VI, Title 22 of the Seattle Municipal Code, or other ordinances
21 applicable to existing buildings, shall be permitted to be made in accordance with the
22 standards contained in those ordinances rather than the standards for new buildings contained
23 in this code. If standards are not specified in those ordinances, such alterations or repairs shall
24 conform to the requirements of this chapter.
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R107.5.5 Nonstructural alterations or repairs. Alterations or repairs that are nonstructural and that do not affect any member or part of the building or structure required to be fire resistant may be made with the same materials of which the building or structure is constructed, provided that no change is permitted that increases its hazard.

R107.5.6 Maintenance of structural stability. If approved by the building official, minor structural alterations or repairs necessary to maintain the structural stability of the building may be made with the same material of which the building or structure is constructed.

R107.6 Historic buildings and structures. The building official may modify the specific requirements of this code as it applies to landmarks, and require in lieu thereof alternate requirements that, in the opinion of the building official, will result in a reasonable degree of safety to the public and the occupants of those buildings.

For purposes of this section, a landmark is a building or structure that is subject to a requirement to obtain a certificate of approval from the City Landmarks Preservation Board before altering or making significant changes to specific features or characteristics, that has been nominated for designation or has been designated for preservation by the City Landmarks Preservation Board, that has been designated for preservation by the State of Washington, has been listed or determined eligible to be listed in the National Register of Historic Places or is located in a landmark or special review district subject to a requirement to obtain a certificate of approval before making a change to the external appearance of the structure.

R107.7 Unreinforced masonry chimneys. If an unreinforced masonry chimney is altered or if the building in which such a chimney is located undergoes substantial alteration as defined in

Section R107.8.2, the chimney shall be altered to conform to rules promulgated by the building official.

R107.8 Substantial alterations or repairs.

R107.8.1 General. Any building or structure to which substantial alterations or repairs are made shall conform to the requirements of this Section and Sections R310 (emergency escape and rescue openings), R311 (means of egress), R314 (smoke alarms), and R302.2–R302.4 (dwelling unit separation).

R107.8.2 Definition. For the purpose of this section, substantial alterations or repairs may mean any one of the following, as determined by the building official:

1. Repair of buildings with *damage ratios* of 60 percent or more.
2. Remodeling or additions that substantially extend the useful physical and/or economic life of the building or a significant portion of the building.
3. Change to a use within the scope of this code from a use not within the scope of this code.
4. Change from an accessory structure to any other use within the scope of this code.
5. Change from a detached one- or two-family dwelling to a townhouse.
6. Change to adult family home or family child day care home from any other use.

R107.8.3 Seismic regulations. Buildings or structures to which substantial alterations or repairs are made shall comply with Sections R301.1.3 or Sections R403.1.6, R602.10 and R602.11. In addition, the building official may require testing of existing materials, at

applicant or property owner's expense, if there is insufficient evidence of structural strength or integrity of the building or structure.

Exception: In lieu of compliance with the seismic provisions of Sections R403.1.6, R602.10 and R602.11, if approved by the building official, the applicant may evaluate and strengthen portions of the building lateral support structure, such as foundations and cripple walls.

R107.8.4 Other structural work. All other structural work shall comply with the requirements of Chapters 3, 4, 5, 6, 8 and 10 of this code.

R107.9 Change of use.

R107.9.1 If the use of a building or portion thereof is changed, any elements of the dwelling unit envelope that are altered shall comply with the sound transmission control requirements of Section R330.

R107.9.2 If the use of a building or portion thereof is changed to adult family home or to family child day care home, the building shall comply with the applicable provisions of Section R324 or R325.

R107.10 Moved buildings. Residential buildings or structures moved into or within the City are not required to comply with the requirements of this code if the original use classification of the building or structure is not changed. Compliance with the requirements of this chapter is required if the moved residential buildings or structures undergo substantial alteration as defined in R107.8.2. Work performed on new and existing foundations shall comply with all of the requirements of this code for new construction.

SECTION R108

FEES

R108.1 Fees. A fee for each permit and for other activities related to the enforcement of this code shall be paid as set forth in the Fee Subtitle.

Section 3. The following sections of Chapter 2 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 2

DEFINITIONS

SECTION R201

GENERAL

R201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings indicated in this chapter.

R201.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

R201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in other ~~((code publications of the))~~ International Codes ~~((Council))~~.

R201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

R201.5 References to other codes. Whenever an International, National or Uniform Code is referenced in this code, it means the Seattle edition of that code, including local amendments. References to the “Building Code”, “Fire Code”, “Mechanical Code” and “Plumbing Code” mean the Seattle editions of those codes.

SECTION R202

DEFINITIONS

[W] ADULT FAMILY HOME. A dwelling in which a person or persons provide personal care, special care, room and board to more than one but not more than six adults who are not related by blood or marriage to the person or persons providing the services.

[W] ATTIC, HABITABLE. A (~~((finished or unfinished))~~) conditioned area, not considered a story, complying with all of the following requirements:

1. The occupiable floor area is at least 70 square feet (~~((17 m²)))~~ (6.5 m²), in accordance with Section R304,
2. The occupiable floor area has a ceiling height in accordance with Section R305, and
3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.

BUILDING, EXISTING. Existing building is a building erected prior to the adoption of this code, or one ~~((for which a legal building permit has been issued))~~ that has passed a final inspection.

BUILDING OFFICIAL. The ~~((officer or other designated authority charged with the administration and enforcement of this code))~~ Director of the Department of Planning and Development.

BUILDING PERMIT APPLICATION, FULLY COMPLETE. See Section R101.3.1.

[W] CHILD DAY CARE. For the purposes of this code, the care of children during any period of a 24 hour day.

[W] CHILD DAY CARE HOME, FAMILY. A child day care facility, licensed by the state, located in the dwelling of the person or persons under whose direct care and supervision the child is placed, for the care of twelve or fewer children, including children who reside at the home.

DAMAGE RATIO. The ratio between the cost of work and the estimated replacement cost of the building, expressed as a percentage. The work includes repair of damage to structural and fire/life safety systems.

[W] DWELLING UNIT. A single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation. Dwelling units may also include the following uses:

1. Adult family homes, foster family care homes and family child day care homes licensed by the Washington State Department of Social and Health Services.

2. Offices, mercantile, food preparation for off-site consumption, personal care salons or similar uses that are conducted primarily by the occupants of the dwelling unit and are secondary to the use of the unit for dwelling purposes, and that do not exceed 500 square feet (46.4 m²).

3. Owner-occupied dwellings with 5 or fewer guest rooms.

FEE SUBTITLE. Seattle Municipal Code Title 22, Subtitle IX.

[W] FIRE SEPARATION DISTANCE. The distance measured from the ~~((building face))~~ foundation wall or face of the wall framing, whichever is closer, to one of the following:

1. To the closest interior *lot line*; or
2. To the ~~((centerline))~~ opposite side of a street, an alley or public way; or
3. To an imaginary line between two buildings on the *lot*.

The distance shall be measured at a right angle from the face of the wall.

FLOATING HOME. A building constructed on a float, used in whole or in part for human habitation as a single-family dwelling, which is moored, anchored or otherwise secured in waters.

FLOATING HOME MOORAGE. A waterfront facility for the moorage of one or more floating homes and the land and water premises on which it is located.

FLOATING HOME SITE. A part of a floating home moorage, located over water, and designed to accommodate one floating home.

GARBAGE. All discarded putrescible waste matter, including small dead animals weighing not over 15 pounds (6.8 kg), but not including sewage or human or animal excrement.

JURISDICTION. The ~~((governmental unit that has adopted this code under due legislative authority))~~ City of Seattle.

LAND-DISTURBING ACTIVITY. Any activity that results in a movement of earth, or a change in the existing soil cover, both vegetative and nonvegetative, or the existing topography. Land-disturbing activities include, but are not limited to, clearing, grading, filling, excavation and addition of new or the replacement of impervious surface. Compaction, excluding hot asphalt mix, that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity. Vegetation maintenance practices are not considered land disturbing activities.

MEZZANINE, LOFT. An intermediate level or levels between the floor and ceiling of any story with an aggregate floor area of not more than ~~((one-third))~~ one-half of the area of the room or space in which the level or levels are located.

PERSON. ~~((An))~~ Any individual, receiver, (heirs, executors, administrators or assigns, and also includes a) administrator, executor, assignee, trustee in bankruptcy, trust, estate, firm, partnership, joint venture, club, company, joint stock company, business trust, municipal corporation, political subdivision of the State of Washington, the State of Washington and any instrumentality thereof, ((or)) corporation, limited liability company, association, society or any group of individuals acting as a unit, whether mutual, cooperative, fraternal, nonprofit or otherwise, and the United States or any instrumentality thereof ((its or their successors or assigns, or the agent of any of the aforesaid)).

SEWAGE. ~~((Any liquid waste containing animal matter, vegetable matter or other impurity in suspension or solution.))~~ All water-carried waste discharged from the sanitary facilities of buildings occupied or used by people.

[W] SMALL BUSINESS. Any business entity (including a sole proprietorship, corporation, partnership or other legal entity) that is owned and operated independently from all other

businesses, has the purpose of making a profit, and has 50 or fewer employees, or that has a million dollars or less per year in gross sales of window products.

[W] SOURCE SPECIFIC VENTILATION SYSTEM. A mechanical ventilation system including all fans, controls, and ducting, which is dedicated to exhausting contaminant-laden air to the exterior of the building from the room or space in which the contaminant is generated.

STORY ABOVE GRADE PLANE. Any *story* having its finished floor surface entirely above *grade plane*, except that a *basement* shall be considered as a *story above grade plane* where the finished surface of the floor above the *basement* meets any one of the following:

1. Is more than 6 feet (1829 mm) *above grade plane*((-));
2. Is more than 6 feet (1829 mm) above the finished ground level for more than 50 percent of the total building perimeter((-)); or
3. Is more than 12 feet (3658 mm) above the finished ground level ((~~at any point~~)) for more than 25 feet (7620 mm) of the perimeter. Required driveways up to 22 feet (6706 mm) shall not be considered in calculating the 25 foot distance if there is at least 10 feet (3048 mm) between the driveway and all portions of the 25-foot area. See Figure R202.

TOWNHOUSE. A single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with a yard or public way on at least two sides.

Interpretation R202T: The required open space shall be a yard, driveway, parking lot or public way.

UNSAFE. Structurally unsound, provided with inadequate egress, constituting a fire hazard, or otherwise dangerous to human life, or constituting a hazard to safety, health or public welfare because of inadequate maintenance, deterioration, instability, dilapidation, obsolescence, or damage.

WATER HEATER. Any heating appliance or equipment that heats potable water and supplies such water to the potable hot water distribution system.

Interpretation R202W: “Water heater” includes only those appliances that do not exceed pressure of 160 pounds per square inch (1103 kPa), volume of 120 gallons (454 L) and a heat input of 200,000 Btu/hr (58.6 kW).

[W] WHOLE HOUSE VENTILATION SYSTEM. A mechanical ventilation system, including fans, controls, and ducts, which replaces, by direct or indirect means, air from the habitable rooms with outdoor air.

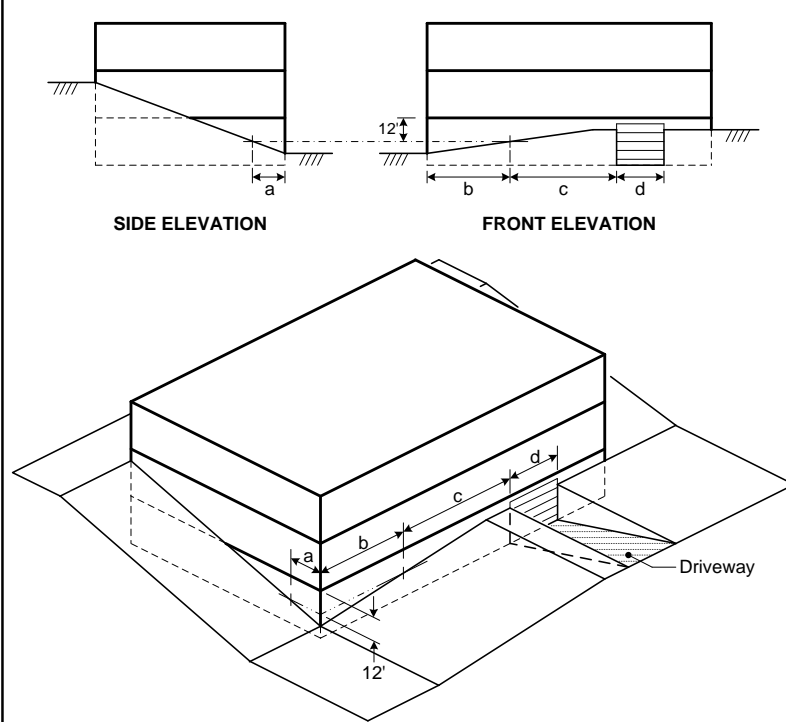


FIGURE R202
STORY ABOVE GRADE PLANE

<u>a + b ≤</u>	<u>Lowest level may be a</u>
<u>25'</u>	<u>basement below grade</u>
<u>c ≥ 10'</u>	<u>if all these are met</u>
<u>d ≤ 22'</u>	

Section 4. The following sections of Chapter 3 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 3
BUILDING PLANNING
SECTION R301
DESIGN CRITERIA

R301.2 Climatic and geographic design criteria. Buildings shall be constructed in accordance with the provisions of this code as limited by the provisions of this section. Additional criteria shall be established by the local *jurisdiction* and set forth in Table R301.2(1).

R301.2.1 Wind limitations. Buildings and portions thereof shall be limited by wind speed, as defined in Table R301.2(1) and construction methods in accordance with this code. Basic wind speeds shall be determined from Figure R301.2(4). Where different construction methods and structural materials are used for various portions of a building, the applicable requirements of

1 this section for each portion shall apply. Where loads for wall coverings, curtain walls, roof
2 coverings, exterior windows, skylights, garage doors and exterior doors are not otherwise
3 specified, the loads listed in Table R301.2(2) adjusted for height and exposure using Table
4 R301.2(3) shall be used to determine design load performance requirements for wall coverings,
5 curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors.

6 Asphalt shingles shall be designed for wind speeds in accordance with Section R905.2.6.

7
8 **R301.2.1.1 Design criteria.** In regions where the basic wind speeds from Figure R301.2(4) equal
9 or exceed 100 miles per hour (45 m/s) in *hurricane-prone regions*, or 110 miles per hour (49
10 m/s) elsewhere, the design of buildings shall be in accordance with one of the following methods.

11 The elements of design not addressed by those documents in Items 1 through 4 shall be in
12 accordance with this code.

13
14 1. American Forest and Paper Association (AF&PA) *Wood Frame Construction Manual for*
15 *One- and Two-Family Dwellings* (WFCM); or

16 2. International Code Council (ICC) *Standard for Residential Construction in High Wind*
17 *Regions* (ICC-600); or

18 3. *Minimum Design Loads for Buildings and Other Structures* (ASCE-7); or

19 4. American Iron and Steel Institute (AISI), *Standard for Cold-Formed Steel Framing—*
20 *Prescriptive Method For One- and Two-Family Dwellings* (AISI S230).

21 5. Concrete construction shall be designed in accordance with the provisions of this code.

22 6. Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of
23 this code.

TABLE R301.2(1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

((GROUND) ROOF SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGOR Y ^f	SUBJECT TO DAMAGE FROM			WINT ER DESI GN TEM P ^e	ICE BARRIE R UNDER LAYME NT REQUIR ED ^h	FLOOD HAZAR DS ^g	AIR FREEZI NG INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed d (mph)	Topograph ic effects ^k		Weatheri ng ^a	Fros t line dept h ^b	Term ite ^c					
<u>25 psf</u>	<u>85</u>	<u>No</u>	<u>D₂</u>	<u>Moderat e</u>	<u>12"</u>	<u>none to slight</u>	<u>24°</u>	<u>No</u>	<u>(a) 1989 (b) May 16, 1995</u>	<u>250</u>	<u>52.8°</u>

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., “negligible,” “moderate” or “severe”) for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

1 c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending
2 on whether there has been a history of local subterranean termite damage.

3 d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind
4 speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific
5 basis in accordance with Section R301.2.1.4.
6

7 e. ~~((The outdoor design dry bulb temperature shall be selected from the columns of 97 1/2 percent~~
8 ~~values for winter from Appendix D of the *International Plumbing Code*. Deviations from the~~
9 ~~Appendix D temperatures shall be permitted to reflect local climates or local weather experience~~
10 ~~as determined by the building official.)) The winter design temperature is taken from the~~
11 ~~Washington State Energy Code with Seattle Amendments.~~

12
13 f. The jurisdiction shall fill in this part of the table with the seismic design category determined
14 from Section R301.2.2.1.
15

16 g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry
17 into the National Flood Insurance Program (date of adoption of the first code or ordinance for
18 management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel
19 numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map
20 adopted by the authority having jurisdiction, as amended.
21

22 h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and
23 R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the
24
25
26
27
28

jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall fill in this part of the table with “NO.”

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table “Air Freezing Index- USA Method (Base 32°)” at www.ncdc.noaa.gov/fpsf.html.

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F)” at www.ncdc.noaa.gov/fpsf.html.

k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall indicate “NO” in this part of the table.

Note to footnote k: Topographical effects shall be included for buildings designed according to the International Building Code.

SECTION R302

FIRE-RESISTANT CONSTRUCTION

R302.1 Exterior walls. Construction, projections, openings and penetrations of *exterior walls* of *dwelling*s and accessory buildings shall comply with Table R302.1.

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.
2. Walls of *dwelling*s and *accessory structures* located on the same *lot*.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits by Section R105.2 are not required to provide wall protection based on location on the *lot*. Projections beyond the *exterior wall* shall not extend over the *lot line*.
4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.

Interpretation I302.1: For purposes of Section R302.1, gutters 6 inches (152 mm) or less in width that are not an integral part of the structure are not considered projections.

[W]TABLE R302.1

EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	(Fire-resistance rated)	1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	< 5 feet
	(Not fire-resistance rated)	0 hours	≥ 5 feet
Projections	(Fire-resistance rated)	1 hour on the underside ^{a,b}	≥ 2 feet to 5 feet
	(Not fire-resistance rated)	0 hours	5 feet
Openings in walls	Not allowed	N/A	< 3 feet
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section ((R317.3)) <u>R302.4</u>	< 5 feet
		None required	5 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fire blocking is provided from the wall top plate to the underside of the roof sheathing.

b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided no gable vent openings are allowed.

[W] R302.2 Townhouses. Each *townhouse* shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exceptions:

1. A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses where an automatic sprinkler system is installed in accordance with NFPA 13 D, if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with ~~((Chapters 34 through 43.))~~ the Seattle Electrical Code. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

2. A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with the Seattle Electrical Code. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

[W] R302.2.1 Continuity. The fire-resistance-rated wall or assembly separating *townhouses* shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The

1 fire-resistance rating shall extend the full length of the wall or assembly, including wall
2 extensions through and separating attached enclosed *accessory structures*.

3 Where a story extends beyond the exterior wall of a story below:

4 1. The fire-resistance-rated wall or assembly shall extend to the outside edge of the upper story;

5
6 or

7 2. The underside of the exposed floor-ceiling assembly shall be protected as required for
8 projections in Section R302.

9
10 **R302.2.2 Parapets.** Parapets constructed in accordance with Section R302.2.3 shall be
11 constructed for *townhouses* as an extension of exterior walls or common walls in accordance
12 with the following:

13 1. Where roof surfaces adjacent to the wall or walls are at the same elevation, the parapet shall
14 extend not less than 30 inches (762 mm) above the roof surfaces.

15
16 2. Where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof
17 is not more than 30 inches (762 mm) above the lower roof, the parapet shall extend not less than
18 30 inches (762 mm) above the lower roof surface.

19
20 **Exception:** A parapet is not required in the two cases above when the roof is covered with a
21 minimum class C roof covering, and the roof decking or sheathing is of noncombustible
22 materials or *approved* fire-retardant-treated wood for a distance of 4 feet (1219 mm) on each
23 side of the wall or walls, or one layer of 5/8-inch (15.9 mm) Type X gypsum board is
24 installed directly beneath the roof decking or sheathing, supported by a minimum of nominal
25

2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a minimum distance of 4 feet (1219 mm) on each side of the wall or walls.

3. A parapet is not required where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is more than 30 inches (762 mm) above the lower roof. The common wall construction from the lower roof to the underside of the higher roof deck shall have not less than a 1-hour fire-resistance rating. The wall shall be rated for exposure from both sides.

R302.2.3 Parapet construction. Parapets shall have the same fire-resistance rating as that required for the supporting wall or walls. On any side adjacent to a roof surface, the parapet shall have noncombustible faces for the uppermost 18 inches (457 mm), to include counterflashing and coping materials. Where the roof slopes toward a parapet at slopes greater than 2 units vertical in 12 units horizontal (16.7-percent slope), the parapet shall extend to the same height as any portion of the roof within a distance of 3 feet (914 mm), but in no case shall the height be less than 30 inches (762 mm).

[W] R302.2.4 Structural independence. Each individual *townhouse* shall be structurally independent.

Exceptions:

1. Foundations supporting *exterior walls* or common walls.
2. Structural roof and wall sheathing from each unit may ~~((fasten))~~ be fastened to the common wall framing.

3. Nonstructural wall and roof coverings.

4. Flashing at termination of roof covering over common wall.

5. *Townhouses* separated by a common ((4)) 2-hour fire-resistance-rated wall as provided in Section R302.2.

6. Floor sheathing may fasten to the floor framing of both units.

R302.13 Combustible insulation clearance. Combustible insulation shall be separated a minimum of 3 inches (76 mm) from recessed luminaires, fan motors and other heat-producing devices.

Exception: Where heat-producing devices are listed for lesser clearances, combustible insulation complying with the listing requirements shall be separated in accordance with the conditions stipulated in the listing. Recessed luminaires installed in the building thermal envelope shall ~~((meet the requirements of Section N1102.4.5))~~ comply with the Washington State Energy Code with Seattle amendments.

[W] SECTION R303

LIGHT, VENTILATION AND HEATING

R303.1 ((Habitable rooms)) Natural light. All habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. ~~((Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings~~

shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.))

Exception((s)):

((1. The glazed areas need not be openable where the opening is not required by Section R310 and an ~~approved mechanical ventilation~~ system capable of producing 0.35 air change per hour in the room is installed or a whole-house mechanical ~~ventilation~~ system is installed capable of supplying outdoor ~~ventilation~~ air of 15 cubic feet per minute (cfm) (78 L/s) per occupant computed on the basis of two occupants for the first bedroom and one occupant for each additional bedroom.

2.)) The glazed areas need not be installed in rooms where ((~~Exception 1 above is satisfied and~~) artificial light is provided capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

((3. Use of sunroom ~~additions~~ and patio covers, as defined in Section R202, shall be permitted for natural ~~ventilation~~ if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.))

((~~R303.2~~)) **R303.1.1 Adjoining rooms.** For the purpose of determining light ((and ~~ventilation~~)) requirements, any room shall be considered as a portion of an adjoining room when at least one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room but not less than 25 square feet (2.3 m2).

Exception: Openings required for light (~~and/or ventilation~~) shall be permitted to open into a thermally isolated sunroom *addition* or patio cover, provided that there is an openable area between the adjoining room and the sunroom *addition* or patio cover of not less than one-tenth of the floor area of the interior room but not less than 20 square feet (2 m²). (~~The minimum openable area to the outdoors shall be based upon the total floor area being ventilated.~~)

R303.2 Minimum ventilation performance. Every space intended for human occupancy shall be equipped with source specific and whole house ventilation systems designed and installed as specified in Sections R1507 and R1508.

~~((**R303.3 Bathrooms.** Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m²), one half of which must be openable.~~

~~**Exception:** The glazed areas shall not be required where artificial light and a mechanical ventilation system are provided.~~

~~The minimum ventilation rates shall be 50 cubic feet per minute (24 L/s) for intermittent ventilation or 20 cubic feet per minute (10 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.))~~

R303.4 Opening location. Outdoor intake and exhaust openings shall be located in accordance with Sections R303.4.1 and R303.4.2.

R303.4.1 Intake openings. Mechanical and gravity outdoor air intake openings shall be located a minimum of 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents,

chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code. Where a source of contaminant is located within 10 feet (3048 mm) of an intake opening, such opening shall be located a minimum of ~~((2 feet (610 mm)))~~ 3 feet (914 mm) below the contaminant source. For the purposes of this section, the exhaust from *dwelling* unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.

R303.4.2 Exhaust openings. Exhaust air shall not be directed onto walkways.

[W] R303.6 Stairway illumination. All interior and exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Stairway illumination shall receive primary power from the building wiring. Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. For interior stairs the artificial light sources shall be capable of illuminating treads and landings to levels not less than 1 foot-candle (11 lux) measured at the center of treads and landings. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. Exterior stairways providing access to a *basement* from the outside *grade* level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway.

Exception: An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section.

R303.6.1 Light activation. Where lighting outlets are installed in interior stairways, there shall be a wall switch at each floor level to control the lighting outlet where the stairway has six or

more risers. The illumination of exterior stairways shall be controlled from inside the *dwelling* unit.

Exception: Lights that are continuously illuminated or automatically controlled.

R303.8 Required heating. ~~((When the winter design temperature in Table R301.2(1) is below 60°F (16°C), every))~~ Every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms, baths and toilet rooms at the design temperature specified in Table R301.2(1). The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

[W] R303.8.1 Definitions. For the purposes of Sections R303.8.1 through R303.8.3 only, the following definitions apply.

DESIGNATED AREAS are those areas designated by a county to be an urban growth area in chapter 36.70A RCW or those areas designated by the U.S. Environmental Protection Agency as being in nonattainment for particulate matter.

SUBSTANTIALLY REMODELED means any alteration or restoration of a building exceeding 60 percent of the appraised value of such building within a 12 month period. For the purpose of this section, the appraised value is the estimated cost to replace the building and structure in kind, based on current replacement costs.

R303.8.2 Primary heating source. Primary heating sources in all new and substantially remodeled buildings in designated areas shall not be dependent upon wood stoves.

R303.8.3 Solid-fuel-burning devices. No used solid-fuel-burning device shall be installed in new or existing buildings unless such device is United States Environmental Protection Agency certified or a pellet stove either certified or exempt from certification by the United States Environmental Protection Agency.

Exception: Antique wood cook stoves and heaters manufactured prior to 1940.

SECTION R311

MEANS OF EGRESS

R311.4 Vertical egress. Egress from habitable levels including habitable attics and *basements* not provided with an egress door in accordance with Section R311.2 shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

[W] Exception: Stairs or ladders within an individual dwelling unit used for access to areas of 200 square feet (18.6 m²) or less, and not containing the primary bathroom or kitchen.

SECTION R312

GUARDS

R312.3 Opening limitations. Required *guards* shall not have openings from the walking surface to the required *guard* height which allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. *Guards* on the open sides of stairs shall not have openings which allow passage of a sphere 4-3/8 inches (111 mm) in diameter.

Code Alternate R312.3: Intermediate rails need not be provided at the glazed sides of stairs, ramps and landings, provided the glazing complies with Section R308.3.

((SECTION R313

AUTOMATIC FIRE SPRINKLER SYSTEMS

~~**R313.1 Townhouse automatic fire sprinkler systems.** An automatic residential fire sprinkler system shall be installed in *townhouses*.~~

~~**Exception:** An automatic residential fire sprinkler system shall not be required when *additions* or *alterations* are made to existing *townhouses* that do not have an automatic residential fire sprinkler system installed.~~

~~**R313.1.1 Design and installation.** Automatic residential fire sprinkler systems for *townhouses* shall be designed and installed in accordance with Section P2904.~~

~~**R313.2 One and two family dwellings automatic fire systems.** Effective January 1, 2011, an automatic residential fire sprinkler system shall be installed in one and two family *dwellings*.~~

~~**Exception:** An automatic residential fire sprinkler system shall not be required for *additions* or *alterations* to existing buildings that are not already provided with an automatic residential sprinkler system.~~

~~**R313.2.1 Design and installation.** Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D:))~~

SECTION R314

SMOKE ALARMS

[W] R314.3 Location. Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional *story* of the *dwelling*, including *basements* ((and *habitable attics*)) but not including crawl spaces and uninhabitable *attics*. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the

upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.

4. In napping areas in family child day care homes.

When more than one smoke alarm is required to be installed within an individual *dwelling* unit, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

R314.3.1 Alterations, repairs and additions. When *alterations*, repairs or *additions* requiring a *permit* occur, or when one or more sleeping rooms are added or created in existing *dwelling*s, the individual *dwelling unit* shall be equipped with smoke alarms located as required for new *dwelling*s.

Exceptions:

1. Work involving the exterior surfaces of *dwelling*s, such as the replacement of roofing or siding, or the *addition* or replacement of windows or doors, or the *addition* of a porch or deck, are exempt from the requirements of this section.

2. Installation, *alteration* or repairs of plumbing, electrical or mechanical systems are exempt from the requirements of this section.

SECTION R315

CARBON MONOXIDE ALARMS

1 **[W] R315.1 Carbon monoxide alarms.** For new construction, an approved carbon monoxide
2 alarm shall be installed by January 1, 2011, outside of each separate sleeping area in the
3 immediate vicinity of the bedrooms in *dwelling units*. ~~((within which fuel fired appliances are~~
4 ~~installed and in dwelling units that have attached garages.))~~ In a building where a tenancy exists,
5 the tenant shall maintain the alarm as specified by the manufacturer including replacement of the
6 batteries.

7
8 **[W] R315.2** ~~((Where required in existing dwellings. Where work requiring a permit occurs in~~
9 ~~existing dwellings that have attached garages or in existing dwellings within which fuel fired~~
10 ~~appliances exist, carbon monoxide alarms shall be provided in accordance with Section~~
11 ~~R315.1.))~~ **Existing Dwellings.** Existing dwellings shall be equipped with carbon monoxide
12 alarms by July 1, 2011.

13
14 **Exception:** Owner-occupied detached one-family dwellings legally occupied prior to July 1,
15 2010.

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17 ***

18 SECTION R319

19 SITE ADDRESS

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22 **R319.1 Address numbers.** Buildings shall have *approved* address numbers, building numbers or
23 *approved* building identification placed in a position that is plainly legible and visible from the
24 street or road fronting the property. These numbers shall contrast with their background. Address
25 numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4
26

1 inches (102 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where access is by
2 means of a private road and the building address cannot be viewed from the public way, a
3 monument, pole or other sign or means shall be used to identify the structure. Premises
4 identification shall be provided in compliance with Seattle Building Code Section 501.2.

5 ***

6 **SECTION R322**

7 **FLOOD-RESISTANT CONSTRUCTION**

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12 **R322.1 General.** Buildings and structures constructed in whole or in part in flood hazard areas
13 (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in
14 accordance with the provisions contained in this section and Seattle Municipal Code Chapter
15 25.06, the Seattle Floodplain Development Ordinance.

16
17 **Exception:** Buildings and structures located in whole or in part in identified floodways shall be
18 designed and constructed in accordance with ASCE 24.

19 **R322.1.1 Alternative provisions.** As an alternative to the requirements in Section R322.3 for
20 buildings and structures located in whole or in part in coastal high-hazard areas (V Zones),
21 ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

22
23 **R322.1.2 Structural systems.** All structural systems of all buildings and structures shall be
24 designed, connected and anchored to resist flotation, collapse or permanent lateral movement due
25 to structural loads and stresses from flooding equal to the design flood elevation.
26

R322.1.3 Flood-resistant construction. All buildings and structures erected in areas prone to flooding shall be constructed by methods and practices that minimize flood damage.

R322.1.4 Establishing the design flood elevation. The design flood elevation shall be used to define areas prone to flooding. At a minimum, the design flood elevation is the higher of:

1. The base flood elevation at the depth of peak elevation of flooding (including wave height) which has a 1 percent (100-year flood) or greater chance of being equaled or exceeded in any given year, or

2. The elevation of the design flood associated with the area designated on a flood hazard map adopted by the community, or otherwise legally designated.

R322.1.4.1 Determination of design flood elevations. If design flood elevations are not specified, the *building official* is authorized to require the applicant to:

1. Obtain and reasonably use data available from a federal, state or other source; or

2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a registered *design professional* who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.

R322.1.4.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall demonstrate that the effect of the proposed buildings and structures on design flood elevations, including fill,

1 when combined with all other existing and anticipated flood hazard area encroachments, will not
2 increase the design flood elevation more than 1 foot (305 mm) at any point within the
3 jurisdiction.

4 **R322.1.5 Lowest floor.** The lowest floor shall be the floor of the lowest enclosed area, including
5 *basement*, but excluding any unfinished flood-resistant enclosure that is useable solely for
6 vehicle parking, building access or limited storage provided that such enclosure is not built so as
7 to render the building or structure in violation of this section.
8

9 **R322.1.6 Protection of mechanical and electrical systems.** Electrical systems, *equipment* and
10 components; heating, ventilating, air conditioning; plumbing *appliances* and plumbing fixtures;
11 *duct systems*; and other service *equipment* shall be located at or above the elevation required in
12 Section R322.2 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas
13 including V Zones). If replaced as part of a substantial improvement, electrical systems,
14 *equipment* and components; heating, ventilating, air conditioning and plumbing *appliances* and
15 plumbing fixtures; *duct systems*; and other service *equipment* shall meet the requirements of this
16 section. Systems, fixtures, and *equipment* and components shall not be mounted on or penetrate
17 through walls intended to break away under flood loads.
18

19 **Exception:** Locating electrical systems, *equipment* and components; heating, ventilating, air
20 conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service
21 *equipment* is permitted below the elevation required in Section R322.2 (flood hazard areas
22 including A Zones) or R322.3 (coastal high-hazard areas including V Zones) provided that they
23 are designed and installed to prevent water from entering or accumulating within the components
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and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation in accordance with ASCE 24.

Electrical wiring systems are permitted to be located below the required elevation provided they conform to the provisions of the ~~((electrical part of this code))~~ Seattle Electrical Code for wet locations.

R322.1.7 Protection of water supply and sanitary sewage systems. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems in accordance with the plumbing provisions of this code. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters in accordance with the ~~((plumbing provisions of this code and Chapter 3 of the International Private Sewage Disposal Code))~~ Uniform Plumbing Code.

R322.1.8 Flood-resistant materials. Building materials used below the elevation required in Section R322.2 (flood hazard areas including A Zones) or R322.3 (coastal high hazard areas including V Zones) shall comply with the following:

1. All wood, including floor sheathing, shall be pressure- preservative-treated in accordance with AWPAC U1 for the species, product, preservative and end use or be the decay-resistant heartwood of redwood, black locust or cedars. Preservatives shall be listed in Section 4 of AWPAC U1.
2. Materials and installation methods used for flooring and interior and *exterior walls* and wall coverings shall conform to the provisions of FEMA/FIA-TB-2.

1 **R322.1.9 Manufactured homes.** New or replacement *manufactured homes* shall be elevated in
2 accordance with Section R322.2 or Section R322.3 in coastal high-hazard areas (V Zones). The
3 anchor and tie-down requirements of Sections AE604 and AE605 of Appendix E shall apply. The
4 foundation and anchorage of *manufactured homes* to be located in identified floodways shall be
5 designed and constructed in accordance with ASCE 24.

6
7 **R322.1.10 As-built elevation documentation.** A registered *design professional* shall prepare
8 and seal documentation of the elevations specified in Section R322.2 or R322.3.

9 **R322.2 Flood hazard areas (including A Zones).** All areas that have been determined to be
10 prone to flooding but not subject to high velocity wave action shall be designated as flood hazard
11 areas. Flood hazard areas that have been delineated as subject to wave heights between 1 1/2 feet
12 (457 mm) and 3 feet (914 mm) shall be designated as Coastal A Zones. All building and
13 structures constructed in whole or in part in flood hazard areas shall be designed and constructed
14 in accordance with Sections R322.2.1 through R322.2.3.

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17 **[W] R322.2.1 Elevation requirements.**

18 1. Buildings and structures in flood hazard areas not designated as Coastal A Zones shall have
19 the lowest floors elevated to or above the design flood elevation, or a greater elevation as
20 designated by Seattle Municipal Code.

21
22 2. Buildings and structures in flood hazard areas designated as Coastal A Zones shall have the
23 lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or to the design
24 flood elevation, whichever is higher.

3. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including *basement*) elevated at least as high above the highest adjacent *grade* as the depth number specified in feet on the FIRM, or at least 2 feet (610 mm) if a depth number is not specified.

4. Basement floors that are below *grade* on all sides shall be elevated to or above the design flood elevation.

Exception: Enclosed areas below the design flood elevation, including *basements* whose floors are not below *grade* on all sides, shall meet the requirements of Section R322.2.2.

[W] SECTION R324

ADULT FAMILY HOMES

R324.1 General. This section applies to all newly constructed adult family homes and all existing single family homes being converted to adult family homes. This section does not apply to those adult family homes licensed by the state of Washington Department of Social and Health Services prior to July 1, 2001.

R324.2 Submittal standards. In addition to those requirements in Section R105, the submittal shall identify the project as a Group R-3 Adult Family Home occupancy. A floor plan shall be submitted identifying the means of egress and the components in the means of egress such as stairs, ramps, platform lifts and elevators. The plans shall indicate the rooms used for clients and the sleeping room classification of each room.

R324.3 Sleeping room classification. Each sleeping room in an adult family home shall be classified as:

1. Type S - where the means of egress contains stairs, elevators or platform lifts.

2. Type NS1 - where one means of egress is at grade level or a ramp constructed in accordance with Section R311.8 is provided.

3. Type NS2 - where two means of egress are at grade level or ramps constructed in accordance with Section R311.8 are provided.

R324.4 Types of locking devices. All bedroom and bathroom doors shall be openable from the outside when locked. Every closet shall be readily openable from the inside.

Every closet shall be readily openable from the inside.

Operable parts of door handles, pulls, latches, locks and other devices installed in adult family homes shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate operable parts shall be 5.0 pounds (22.2 N) maximum. Exit doors shall have no additional locking devices.

R324.5 Smoke alarm requirements. All adult family homes shall be equipped with smoke alarms installed as required in Section R314. Alarms shall be installed in such a manner so that the fire warning may be audible in all parts of the dwelling upon activation of a single device.

R324.6 Escape windows and doors. Every sleeping room shall be provided with emergency escape and rescue windows as required by Section R310. No alternatives to the sill height such as steps, raised platforms or other devices placed by the openings will be approved as meeting this requirement.

R324.7 Fire apparatus access roads and water supply for fire protection. Adult family homes shall be served by fire apparatus access roads and water supplies meeting the requirements of the International Fire Code.

R324.8 Grab Bars. Grab bars shall be installed for all water closets and bathtubs and showers. The grab bars shall comply with ICC/ANSI A117.1 Sections 604.5 and 607.4 and 608.3.

Exception: Grab bars are not required for water closets and bathtubs and showers used exclusively by staff of the adult family home.

R324.9 Ramps. All interior and exterior ramps, when provided, shall be constructed in accordance with Section R311.8 with a maximum slope of 1 vertical to 12 horizontal. The exception to R311.8.1 is not allowed for adult family homes. Handrails shall be installed in accordance with R324.9.1.

R324.9.1 Handrails for ramps. Handrails shall be installed on both sides of ramps between the slope of 1 vertical to 12 horizontal and 1 vertical and 20 horizontal in accordance with R311.8.3.1 through R311.8.3.3.

R324.10 Stair treads and risers. Stair treads and risers shall be constructed in accordance with R311.7.4. Handrails shall be installed in accordance with R324.10.1.

R324.10.1 Handrails for treads and risers. Handrails shall be installed on both sides of treads and risers numbering from one riser to multiple risers. Handrails shall be installed in accordance with R311.7.7.1 through R311.7.7.4.

[W] SECTION R325

FAMILY CHILD DAY CARE HOMES

R325.1 For family child day care homes with more than six children, each floor level used for family child day care purposes shall be served by two remote means of egress. Exterior exit doors shall be operable from the inside without the use of keys or any special knowledge or effort.

R325.2 Basements located more than 4 feet (1219 mm) below grade level shall not be used for family child day care homes unless one of following conditions exists:

1. Stairways from the basement open directly to the exterior of the building without entering the first floor; or

2. One of the two required means of egress discharges directly to the exterior from the basement level, and a self-closing door is installed at the top or bottom of the interior stair leading to the floor above; or

3. One of the two required means of egress is an operable window or door, approved for emergency escape or rescue, that opens directly to a public street, public alley, yard or exit court; or

4. A residential sprinkler system is provided throughout the entire building in accordance with National Fire Protection Association Standard 13D.

R325.3 Floors located more than 4 feet (1219 mm) above grade level shall not be occupied by children in family day care homes.

Exceptions:

1. Use of toilet facilities while under supervision of an adult staff person.

1 2. Family child day care homes may be allowed on the second story if one of the following
2 conditions exists:

3 2.1. Stairways from the second story open directly to the exterior of the building without entering
4 the first floor; or

5 2.2. One of the two required means of egress discharges directly to the exterior from the second
6 story level, and a self-closing door is installed at the top or bottom of the interior stair leading to
7 the floor below; or

8 2.3. A residential sprinkler system is provided throughout the entire building in accordance with
9 National Fire Protection Association Standard 13D.

10 **R325.4** Every sleeping or napping room in a family child day care home shall have at least one
11 operable window for emergency rescue.

12 **Exception:** Sleeping or napping rooms having doors leading to two separate means of egress, or
13 a door leading directly to the exterior of the building.

14 **R325.5** Rooms or spaces containing a commercial-type cooking kitchen, boiler, maintenance
15 shop, janitor closet, laundry, woodworking shop, flammable or combustible storage or painting
16 operation shall be separated from the family child day care area by at least one-hour fire-
17 resistance-rated construction.

18 **Exception:** A fire-resistance-rated separation shall not be required where the food preparation
19 kitchen contains only a domestic cooking range, and the preparation of food does not result in the
20 production of smoke or grease laden vapors.

[W] SECTION R326

PROTECTION AGAINST RADON

R326.1 Protection against radon. The radon control provisions of Appendix F of this code apply to all buildings constructed using the provisions of Section R408.3, unvented crawl space compliance method.

[W] SECTION R327

SWIMMING POOLS, SPAS AND HOT TUBS

R327.1 Design and construction of pools, spas and hot tubs. The provisions of Appendix G control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling.

[W] SECTION R328

METHANE REDUCTION MEASURES

R328.1 Applicability. This section applies to all construction activities on or within 1000 feet (305 m) of an active, closed or abandoned landfill (landfill zone) that has been identified by the building official to be generating levels of methane gas on-site either at or above the lower explosive limit. The distance shall be calculated from the location of the proposed structure to the nearest property line of the active or former landfill site. The building official may waive these requirements if technical studies demonstrate that dangerous amounts of methane are not present on the site.

R328.2 Protection of structures. All enclosed structures to be built within the 1000 foot (305 m) landfill zone shall be protected from potential methane migration. The method for protecting a structure from methane shall be identified in a report prepared by a licensed civil engineer and submitted by the applicant to the building official for approval. The report shall contain a description of the investigation and recommendations for preventing the accumulation of explosive concentrations of methane gas within or under enclosed portions of the building or structure. At the time of final inspection, the civil engineer shall furnish a signed statement attesting that, to the best of the engineer's knowledge, the building or structure has been constructed in accordance with the recommendations for addressing methane gas migration.

SECTION R329

SECURITY FROM CRIMINAL ACTIVITY

R329.1 Building entrance locks. Building entrance doors, including garage doors, shall be capable of locking. They shall be equipped with a dead-locking latch bolt with at least a 1/2 inch throw that penetrates the striker not less than 1/4 inch. Building entrance doors shall be openable from the inside without use of a key or special knowledge or effort.

Exception: Garage-to-exterior doors are permitted to be equipped with an electronically-operated remote control device for opening and closing in lieu of a dead-locking latch bolt. When garage-to-exterior doors are equipped with remote control devices, garage-to-building doors need not be capable of locking.

R329.2 Observation ports. Every building entrance door, other than garage doors, shall have a visitor observation port or glass side light. Observation ports shall be installed at a height of not less than 54 inches (1372 mm) and not more than 66 inches (1676 mm) from the floor.

R329.3 Windows and sliding doors. Dead bolts or other approved locking devices shall be provided on all sliding doors and openable windows. The lock shall be installed so that the mounting screws for the lock case are inaccessible from the outside.

Exception: Windows with sills located 10 feet (3048 mm) or more above grade, or 10 feet or more above a deck, balcony or porch that is not readily accessible from grade except through a housing unit need not have operable inside latching devices.

R329.4 Alternate security devices. Subject to the approval of the building official, alternate security devices are permitted to be substituted for those required by this section. Alternate devices must have equal capability to resist illegal entry. The installation of the device shall not conflict with other requirements of this code and other ordinances regulating the safety of exiting.

SECTION R330

SOUND TRANSMISSION CONTROL

R330.1 General. Wall and floor-ceiling assemblies separating dwelling units shall provide sound insulation in accordance with this Section R330.

R330.1.1 Perimeter joints. Joints in the perimeter of such separating wall or floor-ceiling assembly shall be acoustically sealed with a permanent resilient material approved for the

purpose. The separating wall or floor-ceiling assembly shall extend completely to and be sealed to another separating assembly or an exterior wall, roof or floor assembly.

R330.1.2 Penetrations. Conduits, ducts, pipes and vents within the wall or floor-ceiling assembly causing vibration shall be reasonably isolated from the building construction at points of support by means of resilient sleeves, mounts or underlayments. All other openings through which such conduits, ducts, pipes or vents pass shall have the excess opening fully sealed with insulative and permanently resilient materials approved for the purpose.

R330.1.3 Fire-resistance ratings. Design and materials for sound transmission control shall not impair the fire-resistance rating of separating walls or floor-ceiling assemblies required to be of fire-resistance-rated construction.

R330.2 Airborne sound. Airborne sound insulation for wall and floor-ceiling assemblies shall meet a Sound Transmission Class (STC) rating of 45 when tested in accordance with ASTM E 90.

R330.2.1 Outlet boxes. Electrical outlet boxes shall not be placed back-to-back and shall be offset by not less than 12 inches (305 mm) from outlets in the opposite wall surface. The back and sides of boxes shall be sealed with 1/8 inch resilient sealant and backed by a minimum of 2 inch thick mineral fiber insulation or approved equivalent.

R330.3 Structural-borne sound. Floor-ceiling assemblies between dwelling units or between a dwelling unit and a public or service area within a structure shall have an Impact Insulation Class (IIC) rating of not less than 50 when tested in accordance with ASTM E 492. Floor covering may be included in the assembly to obtain the required ratings.

Exception: Floor assemblies in bathrooms are not required to meet the IIC rating of 50 where structural concrete floor systems are used.

R330.4 Tested assemblies. Field- or laboratory-tested wall or floor-ceiling designs having an STC or IIC of 50 or more may be used without additional field testing when, in the opinion of the building official, the tested design has not been compromised by flanking paths. Tests may be required by the building official when evidence of compromised separations is noted. Wall or floor-ceiling designs field tested by ASTM E 336 having a minimum FSTC or FIIC rating of 45 may be used.

R330.5 Field testing and certification. Field testing, when permitted to determine airborne sound transmission or impact sound insulation class, shall be done in accordance with ASTM E 492 under the supervision of an acoustical professional who is experienced in the field of acoustical testing and engineering and who shall forward certified test results to the building official that minimum sound insulation requirements stated above have been met.

R330.6 Sound transmission control systems. Generic systems listed in GA 600-00 may be accepted where a laboratory test indicates that the requirements of Section R331 are met by the system.

SECTION R331

FLOATING HOMES

R331.1 Definitions. Certain words and terms used in this section, unless clearly inconsistent with their context, are defined as follows:

R331.2 Moorage location. Every floating home moorage shall be located on privately-owned or privately-controlled premises in accordance with the Land Use Code, Title 23 of the Seattle Municipal Code.

R331.3 Land access. Every floating home moorage shall have not less than 20 feet (6096 mm) of land frontage abutting a public street sufficiently improved for automobile travel.

R331.4 Moorage walkways. Every floating home moorage shall have firm and substantial walkways with a net width of not less than 4 feet (1219 mm) and extending from land to every floating home site in the moorage.

R331.5 Moorage lighting. Every floating home moorage and the walkways to every floating home site shall be illuminated to provide safe access. All luminaires shall be listed for the use.

R331.6 Fire protection. Floating home moorages shall be provided with fire extinguishing equipment as follows:

1. Portable fire-protection equipment. One fire extinguisher, 2A, 20-B:C rating minimum, shall be provided in each required hose station. The fire chief shall designate the type and number of all other fire appliances to be installed and maintained in each floating home moorage.

2. Standpipes. All portions of floats exceeding 250 feet (76 500 mm) in distance from fire apparatus access and marine service stations shall be provided with an approved Class I standpipe system installed according to *International Building Code* Section 905 and the *International Fire Code*.

1 **R331.7 Water service connections.** Every floating home moorage shall have a water service
2 connection and shall provide water service piping securely fastened and stabilized above water
3 from the water service connection to an outlet connection at each floating home site on a floating
4 home moorage. The water piping in every floating home in a floating home moorage shall be
5 connected to the water service outlet serving the floating home and the connection shall be
6 securely fastened and stabilized above high water line. Water service connections and water
7 service piping shall be constructed, installed and maintained in accordance with applicable
8 standards established by or pursuant to ordinance.

10 **R331.8 Public sewer connection.** Every floating home moorage any part of which is within 300
11 feet (91 440 mm) of a public sewer and every floating home moorage on Shilshole Bay, Salmon
12 Bay, Lake Washington Ship Canal, Lake Union, Portage Bay, Union Bay and that portion of
13 Lake Washington lying within the city limits of Seattle shall have a lawfully-installed connection
14 to a public sewer.

16 **R331.9 Local side sewer system.** Every floating home moorage within the limits specified in
17 Section R332.8 shall provide a local side sewer system for the collection of sewage from every
18 floating home in the moorage. The local side sewer system shall be connected to the public
19 sewer, shall have an inlet connection at each floating home site and shall be constructed, installed
20 and maintained in accordance with this and all other applicable ordinances regulating the
21 construction, alteration, repair and connection of side sewers.

23 **R331.10 Connection to local side sewer system.** Every floating home in a floating home
24 moorage that is required under Section R331.8 to be connected to a public sewer shall be
25

connected to the local side sewer system. Owners and operators of floating home moorages shall not permit any floating home to be moored at any moorage under their control unless the floating home is connected to the local side sewer system. It is a violation for any person to use, occupy or let any floating home for human habitation within the limits specified in Section R331.8 unless it is connected to the sewer system.

A reconnection permit is required for any floating home that is relocated from its original site of connection to a local side sewer system. Such reconnection is subject to the approval of the Director of Seattle Public Utilities.

R331.11 Sewer installation fees. The fee for the installation of any side sewer serving a floating home moorage is the fee provided by law for the connection to the public sewer of side sewers serving mobile home parks.

R331.12 Plumbing systems. All plumbing and plumbing systems in every floating home shall meet the requirements of the *Uniform Plumbing Code* except as otherwise approved by the Director of Public Health.

R331.13 Garbage disposal. Every floating home moorage shall be provided with adequate garbage storage and collection facilities, which shall be located in an accessible place on the moorage site. No garbage or refuse shall be thrown or dumped into the waters.

R331.14 Electrical service and wiring. Electrical service approved by City Light shall be provided to floating homes and floating home moorages. Electrical wiring and equipment in every floating home shall conform to requirements of the *Seattle Electrical Code*. No floating home shall be permitted to connect or reconnect to the electric utility's distribution system unless

approved for such connection by the building official in accordance with the *Seattle Electrical Code*.

R331.15 New construction and alterations. All new construction of floating homes or major alterations thereto and all floating homes moved into city waters shall conform to the requirements for dwellings set forth in this code and all other applicable codes and ordinances regulating the design, construction, use and occupancy of such buildings and the required installations therein.

R331.16 Housing standards for existing floating homes. Every floating home shall comply with the minimum housing standards of the *Seattle Housing and Building Maintenance Code* except as otherwise approved by the building official in accordance with the *Housing and Building Maintenance Code*.

R331.17. Property lines. The boundaries of floating home moorage sites shall be considered the lot line for determining compliance with Section R302.

Interpretation R331.17: For the purposes of determining the required wall and opening protection and roof-covering requirements, distance shall be measured to the exterior wall of the home, and not to the float.

R331.18 Approval of moorage site plan required. Every floating home moorage shall continuously conform to a moorage site plan that has been approved by the building official. Such approval shall be obtained as follows: Three copies of the site plan, drawn to scale and completely dimensioned, and setting forth the address and legal description of the property on

1 which the moorage is located and the name and address of the owner or operator of the moorage,
2 shall be filed with the building official.

3 The moorage site plan shall show:

4 1. The dimensions of the floating home moorage site;

5
6 2. The location of abutting public waterways;

7 3. The location and dimensions of private waterways and land access to the moorage;

8
9 4. The location and identification of individual floating home sites;

10 5. The location and dimensions of off-street parking spaces;

11 6. The location and dimensions of walkways and any accessory structures or facilities;

12
13 7. The water service system;

14 8. The local side sewer system; and

15 9. The electrical service and lighting system.

16
17 The site plan shall be reviewed by the building official, the Fire Chief, the Director of Public
18 Health, the Director of Seattle Public Utilities and the Director of Transportation for

19 conformance with the requirements of this code and other applicable ordinances. Upon approval

20 by the building official, one copy of the approved site plan shall be retained in the office of the

21 building official, one copy in the office of the Director of Public Health and one copy, which

22 shall be maintained on the premises of the floating home moorage, shall be returned to the owner
23 or operator.

R331.19 Moorage register of ownership. Every owner or operator of a floating home moorage shall maintain a current register of every floating home moored on the premises, such register to record the name and address of the legal owner of each floating home and the registration number assigned to it by the King County Assessor. A copy of the register shall be made available upon request to any City department referred to in this chapter.

Section 5. The following sections of Chapter 4 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 4

FOUNDATIONS

SECTION R402

MATERIALS

R402.2 Concrete. Concrete shall have a minimum specified compressive strength of $f'c$, as shown in Table R402.2. Concrete subject to moderate or severe weathering as indicated in Table R301.2(1) shall be air entrained as specified in Table R402.2. The maximum weight of fly ash, other pozzolans, silica fume, slag or blended cements that is included in concrete mixtures for garage floor slabs and for exterior porches, carport slabs and steps that will be exposed to deicing chemicals shall not exceed the percentages of the total weight of cementitious materials specified

in Section 4.2.3 of ACI 318. Materials used to produce concrete and testing thereof shall comply with the applicable standards listed in Chapter 3 of ACI 318 or ACI 332.

Code Alternate R402.2: Five-sack 2000 psi (13 790 kPa) and 5 1/2-sack 2500 psi (17 237 kPa) concrete mixes in accordance with *Seattle Building Code* Section 1905.2.3 and Table 1905.2 are equivalent to 3000 psi (20 684 kPa) concrete for weathering potential. In addition, air-entrainment is not required to address weathering.

SECTION R403

FOOTINGS

[W] R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, ~~((crushed stone footings,))~~ wood foundations, or other *approved* structural systems which shall be of sufficient design to accommodate all loads ~~((according to))~~ specified in Section R301 and to transmit the resulting loads to the supporting soil within the limitations ~~((as))~~ determined from the ~~((character))~~ characteristics of the soil. Footings shall be supported on undisturbed natural soils or engineered fill. ~~((Concrete footing shall be designed and constructed in accordance with the provisions of Section R403 or in accordance with ACI 332.))~~ Foundation walls complying with Section R404 or stem walls complying with Section R403.1.3 shall be permitted to support exterior walls, exterior braced wall lines and exterior braced wall panels provided they are supported by continuous footings.

R403.1.1 Minimum size. Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1 and Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 6 inches (152 mm) in thickness, T. Footing projections, P, shall be at least 2 inches (51mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Section R403.2, and Figures R403.1(2) and R403.1(3).

[W] R403.1.2 Continuous footing in Seismic Design Categories D0, D1 and D2. The *braced wall panels* at exterior and interior walls of buildings located in Seismic Design Categories D0, D1 and D2 shall be supported by continuous footings. All required interior *braced wall panels* ~~((in buildings with plan dimensions greater than 50 feet (15 240 mm)))~~ shall ~~((also))~~ be supported ~~((by continuous))~~ on footings at intervals not exceeding 50 feet (15 240 mm).

R403.1.3 Seismic reinforcing. Concrete footings located in Seismic Design Categories D0, D1 and D2, as established in Table R301.2(1), shall have minimum reinforcement. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) from the bottom of the footing. In Seismic Design Categories D0, D1 and D2 where a construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical-bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

1 In Seismic Design Categories D0, D1 and D2 where a grouted masonry stem wall is supported on
2 a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than
3 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom
4 of the footing and have a standard hook.

5 In Seismic Design Categories D0, D1 and D2 masonry stem walls without solid grout and
6 vertical reinforcing are not permitted.
7

8 **Exception:** In detached one- and two-family *dwelling*s which are three stories or less in height
9 and constructed with stud bearing walls, plain concrete footings without longitudinal
10 reinforcement supporting walls and isolated plain concrete footings supporting columns or
11 pedestals are permitted.
12

13 **R403.1.3.1 Foundations with stem walls.** Foundations with stem walls shall have installed a
14 minimum of one No. 4 bar within 12 inches (305 mm) of the top of the wall and one No. 4 bar
15 located 3 inches (76 mm) to 4 inches (102 mm) from the bottom of the footing.
16

17 **R403.1.3.2 Slabs-on-ground with turned-down footings.** Slabs on ground with turned down
18 footings shall have a minimum of one No. 4 bar at the top and the bottom of the footing.
19

20 **Exception:** For slabs-on-ground cast monolithically with the footing, locating one No. 5 bar or
21 two No. 4 bars in the middle third of the footing depth shall be permitted as an alternative to
22 placement at the footing top and bottom.

23 Where the slab is not cast monolithically with the footing, No. 3 or larger vertical dowels with
24 standard hooks on each end shall be provided in accordance with Figure R403.1.3.2. Standard
25 hooks shall comply with Section R611.5.4.5.
26

SECTION R408

UNDER-FLOOR SPACE

[W] R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a *basement*) shall have ventilation openings through foundation walls or exterior walls. ~~((The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m²) for each 150 square feet (14 m²) of under floor space area, unless the ground surface is covered by a Class 1 vapor retarder material. When a Class 1 vapor retarder material is used, the minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m²) for each 1,500 square feet (140 m²) of under floor space area. One such ventilating opening shall be within 3 feet (914 mm) of each corner of the building.))~~

[W] R408.2 Openings for under-floor ventilation. The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929m²) for each ~~((150))~~ 300 square feet ~~((14))~~ 28 m²) of under-floor area. One ventilation opening shall be within 3 feet (915 mm) of each corner of the building, except one side of the building shall be permitted to have no ventilation openings. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4 inch (6.4 mm):

1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.

3. Cast-iron grill or grating.

4. Extruded load-bearing brick vents.

5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.

6. Corrosion-resistant wire mesh, with the least dimension being 1/8 inch (3.2 mm) thick.

Exception: The total area of ventilation openings shall be permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with an *approved* Class I vapor retarder material and the required openings are placed to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited. If the installed ventilation is less than 1/300, or if operable louvers are installed, a radon vent shall be installed to originate from a point between the ground cover and soil. The radon vent shall be installed in accordance with the requirements of Appendix F.

[W] R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where:

1. Exposed earth is covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall; and a radon system shall be installed that meets the requirements of Appendix F.

~~((2. One of the following is provided for the under-floor space:~~

~~2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7m²) of crawlspace floor area, including an air~~

1 ~~pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in~~
2 ~~accordance with Section N1102.2.9;~~

3 ~~2.2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s)~~
4 ~~for each 50 square feet (4.7 m²) of under floor area, including a return air pathway to the~~
5 ~~common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with~~
6 ~~Section N1102.2.9;~~

7
8 ~~2.3. Plenum in existing structures complying with Section M1601.5, if under floor space is used~~
9 ~~as a plenum.))~~

10
11 2. Continuously operated mechanical exhaust ventilation is provided at a rate equal to 1 cubic
12 foot per minute (0.47 L/s) for each 50 square feet (4.7 m²) of crawlspace floor area. Exhaust
13 ventilation shall terminate to the exterior.

14
15 **Exception:** Plenum in existing structures complying with Section M1601.5, if under-floor space
16 is used as a plenum.

17 ***

18
19 Section 6. The following sections of Chapter 5 of the International Residential Code,
20 2009 Edition, are amended as follows:

21 **CHAPTER 5**

22 **FLOORS**

23 ***

24
25 **SECTION R502**

WOOD FLOOR FRAMING

[W] R502.2.2.2 Alternate Deck Ledger Connections. Deck ledger connections not conforming to Table R502.2.2.1 shall be attached with approved fasteners having equivalent withdrawal capacity or be designed in accordance with accepted engineering practice. Girders supporting deck joists shall not be supported on deck ledgers or band joists. Deck ledgers shall not be supported on stone or masonry veneer.

[W] R502.2.2.3 Deck Lateral Load Connections. The lateral load connection required by Section R502.2.2 shall be permitted to be in accordance with Figure R502.2.2.3. Hold-down tension devices shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds (6672 N).

Exception: Decks not more than 30 inches above grade at any point may be unattached.

Section 7. The following sections of Chapter 6 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 6

WALL CONSTRUCTION

SECTION R602

WOOD WALL FRAMING

[W] R602.9 ((Cripple)) Foundation cripple walls. Foundation cripple walls shall be framed of studs not smaller than the studding above. When exceeding 4 feet (1219 mm) in height, such walls shall be framed of studs having the size required for an additional *story*.

Cripple walls supporting *bearing walls* or exterior walls or interior braced wall panels as required in Sections R403.1.2 and R602.10.7.1 with a stud height less than 14 inches (356 mm) shall be sheathed on at least one side with a wood structural panel that is fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous *footings* or foundations.

Exception: Footings supporting cripple walls used to support interior braced wall panels as required in Sections R403.1.2 and R602.10.7.1 shall be continuous for the required length of the cripple wall and constructed beyond the cripple wall for a minimum distance of 4 inches and a maximum distance of the footing thickness. The footings extension is not required at intersections with other footings.

R602.10 Wall bracing. Buildings shall be braced in accordance with this section. Where a building, or portion thereof, does not comply with one or more of the bracing requirements in this section, those portions shall be designed and constructed in accordance with Section R301.1.

Exception: Detached one- and two-family *dwelling*s located in Seismic Design Category C are exempt from the seismic bracing requirements of this section. Wind speed provisions for bracing shall be applicable to detached one- and two-family *dwelling*s.

R602.10.1 Braced wall lines. *Braced wall lines* shall be provided in accordance with this section. The length of a *braced wall line* shall be measured as the distance between the ends of the wall line. The end of a *braced wall line* shall be considered to be either:

1. The intersection with perpendicular exterior walls or projection thereof,
2. The intersection with perpendicular *braced wall lines*.

The end of the *braced wall line* shall be chosen such that the maximum length results.

R602.10.1.1 Braced wall panels. *Braced wall panels* shall be constructed in accordance with the intermittent bracing methods specified in Section R602.10.2, or the continuous sheathing methods specified in Sections R602.10.4 and R602.10.5. Mixing of bracing method shall be permitted as follows:

1. Mixing bracing methods from *story* to *story* is permitted.
2. Mixing bracing methods from *braced wall line* to *braced wall line* within a *story* is permitted, except that continuous sheathing methods shall conform to the additional requirements of Sections R602.10.4 and R602.10.5.
3. Mixing bracing methods within a *braced wall line* is permitted only in Seismic Design Categories A and B, and detached *dwellings* in Seismic Design Category C. The length of required bracing for the *braced wall line* with mixed sheathing types shall have the higher bracing length requirement, in accordance with Tables R602.10.1.2(1) and R602.10.1.2(2), of all types of bracing used.

[W] R602.10.1.2 Length of bracing. The length of bracing along each *braced wall line* shall be the greater of that required by the design wind speed and *braced wall line* spacing in accordance with Table R602.10.1.2(1) as adjusted by the factors in the footnotes or the Seismic Design Category and *braced wall line* length in accordance with Table R602.10.1.2(2) as adjusted by the factors in Table R602.10.1.2(3). ~~((or braced))~~ Braced wall panel locations shall comply with the requirements of Section R602.10.1.4. Only walls that are parallel to the *braced wall line* shall be counted toward the bracing requirement of that line, except angled walls shall be counted in accordance with Section R602.10.1.3. In no case shall the minimum total length of bracing in a *braced wall line*, after all adjustments have been taken, be less than 48 inches (1219 mm) total.

R602.10.1.2.1 Braced wall panel uplift load path. *Braced wall panels* located at exterior walls that support roof rafters or trusses (including stories below top *story*) shall have the framing members connected in accordance with one of the following:

1. Fastening in accordance with Table R602.3(1) where:

1.1. The basic wind speed does not exceed 90 mph (40 m/s), the wind exposure category is B, the roof pitch is 5:12 or greater, and the roof span is 32 feet (9754 mm) or less, or

1.2. The net uplift value at the top of a wall does not exceed 100 plf. The net uplift value shall be determined in accordance with Section R802.11 and shall be permitted to be reduced by 60 plf (86 N/mm) for each full wall above.

2. Where the net uplift value at the top of a wall exceeds 100 plf (146 N/mm), installing *approved* uplift framing connectors to provide a continuous load path from the top of the wall to the foundation. The net uplift value shall be as determined in Item 1.2 above.

3. Bracing and fasteners designed in accordance with accepted engineering practice to resist combined uplift and shear forces.

R602.10.1.3 Angled corners. At corners, *braced wall lines* shall be permitted to angle out of plane up to 45 degrees with a maximum diagonal length of 8 feet (2438 mm). When determining the length of bracing required, the length of each *braced wall line* shall be determined as shown in Figure R602.10.1.3. The placement of bracing for the *braced wall lines* shall begin at the point where the *braced wall line*, which contains the angled wall adjoins the adjacent *braced wall line* (Point A as shown in Figure R602.10.1.3). Where an angled corner is constructed at an angle equal to 45 degrees (0.79 rad) and the diagonal length is no more than 8 feet (2438 mm), the angled wall may be considered as part of either of the adjoining *braced wall lines*, but not both. Where the diagonal length is greater than 8 feet (2438 mm), it shall be considered its own *braced wall line* and be braced in accordance with Section R602.10.1 and methods in Section R602.10.2.

R602.10.1.4 Braced wall panel location. *Braced wall panels* shall be located in accordance with Figure R602.10.1.4(1). *Braced wall panels* shall be located not more than 25 feet (7620 mm) on center and shall be permitted to begin no more than 12.5 feet (3810 mm) from the end of a *braced wall line* in accordance with Section R602.10.1 and Figure R602.10.1.4(2). The total combined distance from each end of a *braced wall line* to the outermost *braced wall panel* or panels in the line shall not exceed 12.5 feet (3810 mm). *Braced wall panels* may be offset out-of-plane up to 4 feet (1219 mm) from the designated *braced wall line* provided that the total out-to-out offset of *braced wall panels* in a *braced wall line* is not more than 8 feet (2438 mm) in

1 accordance with Figures R602.10.1.4(3) and R602.10.1.4(4). All *braced wall panels* within a
2 *braced wall line* shall be permitted to be offset from the designated *braced wall line*.

3 **R602.10.1.4.1 Braced wall panel location in Seismic Design Categories D0, D1 and D2.**

4 *Braced wall lines* at exterior walls shall have a *braced wall panel* located at each end of the
5 *braced wall line*.

6
7 **Exception:** For *braced wall panel* construction Method WSP of Section R602.10.2, the *braced*
8 *wall panel* shall be permitted to begin no more than 8 feet (2438 mm) from each end of the
9 *braced wall line* provided one of the following is satisfied in accordance with Figure
10 R602.10.1.4.1:
11

12 1. A minimum 24-inch-wide (610 mm) panel is applied to each side of the building corner and
13 the two 24-inch-wide (610 mm) panels at the corner are attached to framing in accordance with
14 Figure R602.10.4.4(1), or
15

16 2. The end of each *braced wall panel* closest to the corner shall have a hold-down device
17 fastened to the stud at the edge of the *braced wall panel* closest to the corner and to the
18 foundation or framing below. The hold-down device shall be capable of providing an uplift
19 allowable design value of at least 1,800 pounds (8 kN). The hold-down device shall be installed
20 in accordance with the manufacturer's recommendations.
21

22 **[W] R602.10.1.5 Braced wall line spacing for Seismic Design Categories D0, D1 and D2.**

23 Spacing between *braced wall lines* in each *story* shall not exceed 25 feet (7620 mm) on center in
24 both the longitudinal and transverse directions.
25
26
27
28

Exception: In one- and two-story buildings, spacing between two adjacent *braced wall lines* shall not exceed 35 feet (10 668 mm) on center in order to accommodate one single room not exceeding 900 square feet (84 m²) in each *dwelling unit* or accessory structure. Spacing between all other *braced wall lines* shall not exceed 25 feet (7620 mm). A spacing of 35 feet (10 668 mm) or less shall be permitted between *braced wall lines* where the length of wall bracing required by Table R602.10.1.2(2) is multiplied by the appropriate adjustment factor from Table R602.10.1.5, the length-to-width ratio for the floor/roof *diaphragm* does not exceed 3:1, and the top plate lap splice face nailing is twelve 16d nails on each side of the splice.

R602.10.2 Intermittent braced wall panel construction methods. The construction of intermittent *braced wall panels* shall be in accordance with one of the methods listed in Table R602.10.2.

R602.10.2.1 Intermittent braced wall panel interior finish material. Intermittent *braced wall panels* shall have gypsum wall board installed on the side of the wall opposite the bracing material. Gypsum wall board shall be not less than 1/2 inch (12.7 mm) in thickness and be fastened in accordance with Table R702.3.5 for interior gypsum wall board.

Exceptions:

1. Wall panels that are braced in accordance with Methods GB, ABW, PFG and PFH.
2. When an *approved* interior finish material with an in-plane shear resistance equivalent to gypsum board is installed.

3. For Methods DWB, WSP, SFB, PBS, PCP and HPS, omitting gypsum wall board is permitted provided the length of bracing in Tables R602.10.1.2(1) and R602.10.1.2(2) is multiplied by a factor of 1.5.

R602.10.2.2 Adhesive attachment of sheathing in Seismic Design Categories C, D0, D1 and D2. Adhesive attachment of wall sheathing shall not be permitted in Seismic Design Categories C, D0, D1 and D2.

[W] R602.10.2.3 Redesignation of cripple walls. In any Seismic Design Category, cripple walls are permitted to be redesignated as the first story walls for purposes of determining wall bracing requirements. If the cripple walls are redesignated, the stories above the redesignated story shall be counted as the second and third stories, respectively.

R602.10.3 Minimum length of braced panels. For Methods DWB, WSP, SFB, PBS, PCP and HPS, each *braced wall panel* shall be at least 48 inches (1219 mm) in length, covering a minimum of three stud spaces where studs are spaced 16 inches (406 mm) on center and covering a minimum of two stud spaces where studs are spaced 24 inches (610 mm) on center. For Method GB, each *braced wall panel* shall be at least 96 inches (2438 mm) in length where applied to one face of a *braced wall panel* and at least 48 inches (1219 mm) where applied to both faces. For Methods DWB, WSP, SFB, PBS, PCP and HPS, for purposes of computing the length of panel bracing required in Tables R602.10.1.2(1) and R602.10.1.2(2), the effective length of the *braced wall panel* shall be equal to the actual length of the panel. When Method GB panels are applied to only one face of a *braced wall panel*, bracing lengths required in Tables R602.10.1.2(1) and R602.10.1.2(2) for Method GB shall be doubled.

Exceptions:

1. Lengths of *braced wall panels* for continuous sheathing methods shall be in accordance with Table R602.10.4.2.

2. Lengths of Method ABW panels shall be in accordance with Sections R602.10.3.2.

3. Length of Methods PFH and PFG panels shall be in accordance with Section R602.10.3.3 and R602.10.3.4 respectively.

4. For Methods DWB, WSP, SFB, PBS, PCP and HPS in Seismic Design Categories A, B, and C: Panels between 36 inches (914 mm) and 48 inches (1219 mm) in length shall be permitted to count towards the required length of bracing in Tables R602.10.1.2(1) and R602.10.1.2(2), and the effective contribution shall comply with Table R602.10.3.

R602.10.3.1 Adjustment of length of braced panels. When *story height* (H), measured in feet, exceeds 10 feet (3048 mm), in accordance with Section R301.3, the minimum length of *braced wall panels* specified in Section R602.10.3 shall be increased by a factor $H/10$. See Table R602.10.3.1. Interpolation is permitted.

R602.10.3.2 Method ABW: Alternate braced wall panels. Method ABW *braced wall panels* constructed in accordance with one of the following provisions shall be permitted to replace each 4 feet (1219 mm) of *braced wall panel* as required by Section R602.10.3. The maximum height and minimum length and hold-down force of each panel shall be in accordance with Table R602.10.3.2:

1. In one-story buildings, each panel shall be installed in accordance with Figure R602.10.3.2.

The hold-down device shall be installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation or on floor framing supported directly on a foundation which is continuous across the entire length of the *braced wall line*.

2. In the first *story* of two-story buildings, each *braced wall panel* shall be in accordance with Item 1 above, except that the wood structural panel sheathing edge nailing spacing shall not exceed 4 inches (102 mm) on center.

R602.10.3.3 Method PFH: Portal frame with hold-downs. Method PFH *braced wall panels* constructed in accordance with one of the following provisions are also permitted to replace each 4 feet (1219 mm) of *braced wall panel* as required by Section R602.10.3 for use adjacent to a window or door opening with a full-length header:

1. Each panel shall be fabricated in accordance with Figure R602.10.3.3. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure R602.10.3.3. A spacer, if used with a built-up header, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. One anchor bolt not less than 5/8-inch-diameter (16 mm) and installed in accordance with Section R403.1.6 shall be provided in the center of each sill plate. The hold-down devices shall be an embedded-strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation which is continuous across the entire length of the braced wall

1 line. The foundation shall be reinforced as shown on Figure R602.10.3.2. This reinforcement
2 shall be lapped not less than 15 inches (381 mm) with the reinforcement required in the
3 continuous foundation located directly under the braced wall line.

4 2. In the first *story* of two-story buildings, each wall panel shall be braced in accordance with
5 item 1 above, except that each panel shall have a length of not less than 24 inches (610 mm).
6

7 **R602.10.3.4 Method PFG: at garage door openings in Seismic Design Categories A, B and**

8 **C.** Where supporting a roof or one *story* and a roof, alternate *braced wall panels* constructed in
9 accordance with the following provisions are permitted on either side of garage door openings.

10 For the purpose of calculating wall bracing amounts to satisfy the minimum requirements of
11 Table R602.10.1.2(1), the length of the alternate *braced wall panel* shall be multiplied by a factor
12 of 1.5.
13

14 1. *Braced wall panel* length shall be a minimum of 24 inches (610 mm) and *braced wall panel*
15 height shall be a maximum of 10 feet (3048 mm).
16

17 2. *Braced wall panel* shall be sheathed on one face with a single layer of 7/16-inch-minimum (11
18 mm) thickness wood structural panel sheathing attached to framing with 8d common nails at 3
19 inches (76 mm) on center in accordance with Figure R602.10.3.4.
20

21 3. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated
22 header and shall be nailed to the header at 3 inches (76 mm) on center grid in accordance with
23 Figure R602.10.3.4.
24

4. The header shall consist of a minimum of two solid sawn 2·12s (51 by 305 mm) or a 3 inches · 11.25 inch (76 by 286 mm) glued-laminated header. The header shall extend between the inside faces of the first full-length outer studs of each panel in accordance with Figure R602.10.3.4. The clear span of the header between the inner studs of each panel shall be not less than 6 feet (1829 mm) and not more than 18 feet (5486 mm) in length.

5. A strap with an uplift capacity of not less than 1,000 pounds (4448 N) shall fasten the header to the side of the inner studs opposite the sheathing face. Where building is located in Wind Exposure Categories C or D, the strap uplift capacity shall be in accordance with Table R602.10.4.1.1.

6. A minimum of two bolts not less than 1/2-inch (12.7 mm) diameter shall be installed in accordance with Section R403.1.6. A 3/16-inch by 21/2-inch (4.8 by 63 by 63 mm) by 21/2-inch steel plate washer is installed between the bottom plate and the nut of each bolt.

7. *Braced wall panel* shall be installed directly on a foundation.

8. Where an alternate *braced wall panel* is located only on one side of the garage opening, the header shall be connected to a supporting jack stud on the opposite side of the garage opening with a metal strap with an uplift capacity of not less than 1,000 pounds. Where that supporting jack stud is not part of a *braced wall panel* assembly, another 1,000 pounds (4448 N) strap shall be installed to attach the supporting jack stud to the foundation.

R602.10.4 Continuous sheathing. *Braced wall lines* with continuous sheathing shall be constructed in accordance with this section. All *braced wall lines* along exterior walls on the same *story* shall be continuously sheathed.

Exception: Within Seismic Design Categories A, B and C or in regions where the basic wind speed is less than or equal to 100 mph (45 m/s), other bracing methods prescribed by this code shall be permitted on other *braced wall lines* on the same *story* level or on any *braced wall line* on different *story* levels of the building.

R602.10.4.1 Continuous sheathing braced wall panels. Continuous sheathing methods require structural panel sheathing to be used on all sheathable surfaces on one side of a *braced wall line* including areas above and below openings and gable end walls. *Braced wall panels* shall be constructed in accordance with one of the methods listed in Table R602.10.4.1. Different bracing methods, other than those listed in Table R602.10.4.1, shall not be permitted along a *braced wall line* with continuous sheathing.

R602.10.4.1.1 Continuous portal frame. Continuous portal frame *braced wall panels* shall be constructed in accordance with Figure R602.10.4.1.1. The number of continuous portal frame panels in a single *braced wall line* shall not exceed four. For purposes of resisting wind pressures acting perpendicular to the wall, the requirements of Figure R602.10.4.1.1 and Table R602.10.4.1.1 shall be met. There shall be a maximum of two braced wall segments per header and header length shall not exceed 22 feet (6706 mm). Tension straps shall be installed in accordance with the manufacturer's recommendations.

R602.10.4.2 Length of braced wall panels with continuous sheathing. *Braced wall panels* along a *braced wall line* with continuous sheathing shall be full-height with a length based on the adjacent clear opening height in accordance with Table R602.10.4.2 and Figure R602.10.4.2. Within a *braced wall line* when a panel has an opening on either side of differing heights, the

taller opening height shall be used to determine the panel length from Table R602.10.4.2. For Method CS-PF, wall height shall be measured from the top of the header to the bottom of the bottom plate as shown in Figure R602.10.4.1.1.

R602.10.4.3 Length of bracing for continuous sheathing. *Braced wall lines* with continuous sheathing shall be provided with *braced wall panels* in the length required in Tables R602.10.1.2(1) and R602.10.1.2(2). Only those full-height *braced wall panels* complying with the length requirements of Table R602.10.4.2 shall be permitted to contribute to the minimum required length of bracing.

R602.10.4.4 Continuously sheathed braced wall panel location and corner construction. For all continuous sheathing methods, full-height *braced wall panels* complying with the length requirements of Table R602.10.4.2 shall be located at each end of a *braced wall line* with continuous sheathing and at least every 25 feet (7620 mm) on center. A minimum 24 inch (610 mm) wood structural panel corner return shall be provided at both ends of a *braced wall line* with continuous sheathing in accordance with Figures R602.10.4.4(1) and R602.10.4.4(2). In lieu of the corner return, a hold-down device with a minimum uplift design value of 800 pounds (3560 N) shall be fastened to the corner stud and to the foundation or framing below in accordance with Figure R602.10.4.4(3).

Exception: The first *braced wall panel* shall be permitted to begin 12.5 feet (3810 mm) from each end of the *braced wall line* in Seismic Design Categories A, B and C and 8 feet (2438 mm) in Seismic Design Categories D0, D1 and D2 provided one of the following is satisfied:

1. A minimum 24 inch (610 mm) long, full-height wood structural panel is provided at both sides of a corner constructed in accordance with Figure R602.10.4.4(1) at the *braced wall line* ends in accordance with Figure R602.10.4.4(4), or

2. The *braced wall panel* closest to the corner shall have a hold-down device with a minimum uplift design value of 800 pounds (3560 N) fastened to the stud at the edge of the *braced wall panel* closest to the corner and to the foundation or framing below in accordance with Figure R602.10.4.4(5).

R602.10.5 Continuously-sheathed braced wall line using Method CS-SFB (structural fiberboard sheathing). Continuously sheathed *braced wall lines* using structural fiberboard sheathing shall comply with this section. Different bracing methods shall not be permitted within a continuously sheathed *braced wall line*. Other bracing methods prescribed by this code shall be permitted on other *braced wall lines* on the same *story* level or on different *story* levels of the building.

R602.10.5.1 Continuously sheathed braced wall line requirements. Continuously-sheathed *braced wall lines* shall be in accordance with Figure R602.10.4.2 and shall comply with all of the following requirements:

1. Structural fiberboard sheathing shall be applied to all exterior sheathable surfaces of a *braced wall line* including areas above and below openings.

2. Only full-height or blocked *braced wall panels* shall be used for calculating the braced wall length in accordance with Tables R602.10.1.2(1) and R602.10.1.2(2).

R602.10.5.2 Braced wall panel length. In a continuously- sheathed structural fiberboard *braced wall line*, the minimum *braced wall panel* length shall be in accordance with Table R602.10.5.2.

R602.10.5.3 Braced wall panel location and corner construction. A *braced wall panel* shall be located at each end of a continuously-sheathed *braced wall line*. A minimum 32-inch (813 mm) structural fiberboard sheathing panel corner return shall be provided at both ends of a continuously-sheathed *braced wall line* in accordance with Figure R602.10.4.4(1) In lieu of the corner return, a hold-down device with a minimum uplift design value of 800 pounds (3560 N) shall be fastened to the corner stud and to the foundation or framing below in accordance with Figure R602.10.4.4(3).

Exception: The first *braced wall panel* shall be permitted to begin 12 feet 6 inches (3810 mm) from each end of the *braced wall line* in Seismic Design Categories A, B and C provided one of the following is satisfied:

1. A minimum 32-inch-long (813 mm), full-height structural fiberboard sheathing panel is provided at both sides of a corner constructed in accordance with Figure R602.10.4.4(1) at the *braced wall line* ends in accordance with Figure R602.10.4.4(4), or

2. The *braced wall panel* closest to the corner shall have a hold-down device with a minimum uplift design value of 800 pounds (3560 N) fastened to the stud at the edge of the *braced wall panel* closest to the corner and to the foundation or framing below in accordance with Figure R602.10.4.4(5).

R602.10.5.4 Continuously sheathed braced wall lines. Where a continuously-sheathed *braced wall line* is used in Seismic Design Categories D0, D1 and D2 or regions where the basic wind

1 speed exceeds 100 miles per hour (45 m/s), the *braced wall line* shall be designed in accordance
2 with accepted engineering practice and the provisions of the *International Building Code*. Also,
3 all other exterior *braced wall lines* in the same *story* shall be continuously sheathed.

4 **R602.10.6 Braced wall panel connections.** *Braced wall panels* shall be connected to floor
5 framing or foundations as follows:
6

7 1. Where joists are perpendicular to a *braced wall panel* above or below, a rim joist, band joist or
8 blocking shall be provided along the entire length of the *braced wall panel* in accordance with
9 Figure R602.10.6(1).
10

11 Fastening of top and bottom wall plates to framing, rim joist, band joist and/or blocking shall be
12 in accordance with Table R602.3(1).
13

14 2. Where joists are parallel to a *braced wall panel* above or below, a rim joist, end joist or other
15 parallel framing member shall be provided directly above and below the *braced wall panel* in
16 accordance with Figure R602.10.6(2). Where a parallel framing member cannot be located
17 directly above and below the panel, full-depth blocking at 16 inch (406 mm) spacing shall be
18 provided between the parallel framing members to each side of the *braced wall panel* in
19 accordance with Figure R602.10.6(2). Fastening of blocking and wall plates shall be in
20 accordance with Table R602.3(1) and Figure R602.10.6(2).
21

22 3. Connections of *braced wall panels* to concrete or masonry shall be in accordance with Section
23 R403.1.6.
24

25 **R602.10.6.1 Braced wall panel connections for Seismic Design Categories D0, D1 and D2.**

26 *Braced wall panels* shall be fastened to required foundations in accordance with Section
27
28

R602.11.1, and top plate lap splices shall be face-nailed with at least eight 16d nails on each side of the splice.

R602.10.6.2 Connections to roof framing. Exterior *braced wall panels* shall be connected to roof framing as follows.

1. Parallel rafters or roof trusses shall be attached to the top plates of *braced wall panels* in accordance with Table R602.3(1).

2. For SDC A, B and C and wind speeds less than 100 miles per hour (45 m/s), where the distance from the top of the rafters or roof trusses and perpendicular top plates is 9 1/4 inches (235 mm) or less, the rafters or roof trusses shall be connected to the top plates of *braced wall lines* in accordance with Table R602.3(1) and blocking need not be installed. Where the distance from the top of the rafters and perpendicular top plates is between 9 1/4 inches (235 mm) and 15 1/4 inches (387 mm) the rafters shall be connected to the top plates of *braced wall panels* with blocking in accordance with Figure R602.10.6.2(1) and attached in accordance with Table R602.3(1). Where the distance from the top of the roof trusses and perpendicular top plates is between 9 1/4 inches (235 mm) and 15 1/4 inches (387 mm) the roof trusses shall be connected to the top plates of *braced wall panels* with blocking in accordance with Table R602.3(1).

3. For SDC D0, D1 and D2 or wind speeds of 100 miles per hour (45 m/s) or greater, where the distance between the top of rafters or roof trusses and perpendicular top plates is 15 1/4 inches (387 mm) or less, rafters or roof trusses shall be connected to the top plates of *braced wall panels* with blocking in accordance with Figure R602.10.6.2(1) and attached in accordance with Table R602.3(1).

4. For all seismic design categories and wind speeds, where the distance between the top of rafters or roof trusses and perpendicular top plates exceeds 15 1/4 inches (387 mm), perpendicular rafters or roof trusses shall be connected to the top plates of *braced wall panels* in accordance with one of the following methods:

4.1. In accordance with Figure R602.10.6.2(2),

4.2. In accordance with Figure R602.10.6.2(3),

4.3. With full height engineered blocking panels designed for values listed in American Forest and Paper Association (AF&PA) Wood Frame Construction Manual for One- and Two-Family *Dwellings* (WFCM). Both the roof and floor sheathing shall be attached to the blocking panels in accordance with Table R602.3(1).

4.4. Designed in accordance with accepted engineering methods.

Lateral support for the rafters and ceiling joists shall be provided in accordance with Section R802.8. Lateral support for trusses shall be provided in accordance with Section R802.10.3. Ventilation shall be provided in accordance with Section R806.1.

R602.10.7 Braced wall panel support. *Braced wall panel* support shall be provided as follows:

1. Cantilevered floor joists, supporting *braced wall lines*, shall comply with Section R502.3.3.

Solid blocking shall be provided at the nearest bearing wall location. In Seismic Design Categories A, B and C, where the cantilever is not more than 24 inches (610 mm), a full height rim joist instead of solid blocking shall be provided.

2. Elevated post or pier foundations supporting *braced wall panels* shall be designed in accordance with accepted engineering practice.

3. Masonry stem walls with a length of 48 inches (1220 mm) or less supporting *braced wall panels* shall be reinforced in accordance with Figure R602.10.7. Masonry stem walls with a length greater than 48 inches (1220 mm) supporting *braced wall panels* shall be constructed in accordance with Section R403.1 *Braced wall panels* constructed in accordance with Sections R602.10.3.2 and R602.10.3.3 shall not be attached to masonry stem walls.

[W] R602.10.7.1 Braced wall panel support for Seismic Design Category D2. In one-story buildings located in Seismic Design Category D2, *braced wall panels* shall be supported on continuous foundations at intervals not exceeding 50 feet (15 240 mm). In two-story buildings located in Seismic Design Category D2, all *braced wall panels* shall be supported on continuous foundations.

~~((Exception: Two-story buildings shall be permitted to have interior *braced wall panels* supported on continuous foundations at intervals not exceeding 50 feet (15 240 mm) provided that:~~

~~1. The height of cripple walls does not exceed 4 feet (1219 mm).~~

~~2. First floor *braced wall panels* are supported on doubled floor joists, continuous blocking or floor beams.~~

~~3. The distance between bracing lines does not exceed twice the building width measured parallel to the *braced wall line*.)~~

R602.10.8 Panel joints. All vertical joints of panel sheathing shall occur over, and be fastened to common studs. Horizontal joints in *braced wall panels* shall occur over, and be fastened to common blocking of a minimum 1 1/2 inch (38 mm) thickness.

Exceptions:

1. Blocking at horizontal joints shall not be required in wall segments that are not counted as *braced wall panels*.
2. Where the bracing length provided is at least twice the minimum length required by Tables R602.10.1.2(1) and R602.10.1.2(2) blocking at horizontal joints shall not be required in *braced wall panels* constructed using Methods WSP, SFB, GB, PBS or HPS.
3. When Method GB panels are installed horizontally, blocking of horizontal joints is not required.

[W] R602.10.9 Cripple wall bracing. In Seismic Design Categories other than D2, cripple walls supporting bearing walls or exterior walls or interior braced wall panels as required in R403.1.2 and R602.10.7.1 shall be braced with a length and type of bracing as required for the wall above in accordance with Tables R602.10.1.2(1) and R602.10.1.2(2) with the following modifications for cripple wall bracing:

1. The length of bracing as determined from Tables R602.10.1.2(1) and R602.10.1.2(2) shall be multiplied by a factor of 1.15, and
2. The wall panel spacing shall be decreased to 18 feet (5486 mm) instead of 25 feet (7620 mm).

[W] R602.10.9.1 Cripple wall bracing in Seismic Design Categories D0, D1 and D2. In addition to the requirements of Section R602.10.9, where *braced wall lines* at interior walls occur without a continuous foundation below, the length of parallel exterior cripple wall bracing shall be 1-1/2 times the length required by Tables R602.10.1.2(1) and R602.10.1.2(2). Where cripple walls braced using Method WSP of Section R602.10.2 cannot provide this additional length, the capacity of the sheathing shall be increased by reducing the spacing of fasteners along the perimeter of each piece of sheathing to 4 inches (102 mm) on center.

In Seismic Design Category D2, cripple walls supporting bearing walls or exterior walls or interior braced wall panels as required in Sections R403.1.2 and R602.10.7.1 shall be braced in accordance with Tables R602.10.1.2(1) and R602.10.1.2(2).

R602.10.9.2 Redesignation of cripple walls. In any Seismic Design Category, cripple walls shall be permitted to be redesignated as the first *story* walls for purposes of determining wall bracing requirements. If the cripple walls are redesignated, the stories above the redesignated *story* shall be counted as the second and third stories, respectively.

SECTION R612

EXTERIOR WINDOWS AND DOORS

[W] R612.6 Testing and labeling. Exterior windows and sliding doors shall be tested by an *approved* independent laboratory, and bear a *label* identifying manufacturer, performance

characteristics and *approved* inspection agency to indicate compliance with
AAMA/WDMA/CSA 101/I.S.2/A440. Exterior side-hinged doors shall be tested and *labeled* as
conforming to AAMA/WDMA/CSA 101/I.S.2/A440 or comply with Section R612.8.

Exceptions:

1. Decorative glazed openings.

2. Custom exterior windows and doors manufactured by a small business are exempt from all
testing requirements in Section R613 provided they meet the applicable provisions of Chapter 24
of the *International Building Code*.

R612.6.1 Comparative analysis. Structural wind load design pressures for window and door
units smaller than the size tested in accordance with Section R612.6 shall be permitted to be
higher than the design value of the tested unit provided such higher pressures are determined by
accepted engineering analysis. All components of the small unit shall be the same as those of the
tested unit. Where such calculated design pressures are used, they shall be validated by an
additional test of the window or door unit having the highest allowable design pressure.

Section 8. The following sections of Chapter 7 of the International Residential Code,
2009 Edition, are amended as follows:

CHAPTER 7

WALL COVERINGS

SECTION R702

INTERIOR COVERING

[W] R702.5 Other finishes. Wood veneer paneling and hardboard paneling shall be placed on wood or cold-formed steel framing spaced not more than 16 inches (406 mm) on center. Wood veneer and hard board paneling less than 1/4 inch (6 mm) nominal thickness shall not have less than a 3/8-inch (10 mm) gypsum board backer. Wood veneer paneling not less than 1/4-inch (6 mm) nominal thickness shall conform to ANSI/ HPVA HP-1. Hardboard paneling shall conform to CPA/ANSI A135.5. All structural panel components within the conditioned space such as plywood, particle board, wafer board and oriented strand board shall be identified as "EXPOSURE 1," "EXTERIOR" or "HUD-APPROVED."

SECTION R703

EXTERIOR COVERING

R703.1 General. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.8.

R703.1.1 Water resistance. The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-

resistant barrier behind the exterior veneer as required by Section R703.2 and a means of draining to the exterior water that enters the assembly. Protection against condensation in the exterior wall assembly shall be provided in accordance with Section R601.3 of this code.

Exceptions:

1. A weather-resistant exterior wall envelope shall not be required over concrete or masonry walls designed in accordance with Chapter 6 and flashed according to Section R703.7 or R703.8.

2. Compliance with the requirements for a means of drainage, and the requirements of Section R703.2 and Section R703.8, shall not be required for an exterior wall envelope that has been demonstrated to resist wind-driven rain through testing of the exterior wall envelope, including joints, penetrations and intersections with dissimilar materials, in accordance with ASTM E 331 under the following conditions:

2.1. Exterior wall envelope test assemblies shall include at least one opening, one control joint, one wall/eave interface and one wall sill. All tested openings and penetrations shall be representative of the intended end-use configuration.

2.2. Exterior wall envelope test assemblies shall be at least 4 feet (1219 mm) by 8 feet (2438 mm) in size.

2.3. Exterior wall assemblies shall be tested at a minimum differential pressure of 6.24 pounds per square foot (299 Pa).

2.4. Exterior wall envelope assemblies shall be subjected to the minimum test exposure for a minimum of 2 hours. The exterior wall envelope design shall be considered to resist wind-driven

rain where the results of testing indicate that water did not penetrate control joints in the exterior wall envelope, joints at the perimeter of openings penetration or intersections of terminations with dissimilar materials.

[W] 3. The requirement for a means of drainage shall not be construed to mean an air space cavity under the exterior cladding for an exterior wall clad with panel or lapped siding made of plywood, engineered wood, hardboard, or fiber cement. A water-resistive barrier as required by Section R703.2 and Table R703.4 will be required on exterior walls.

Interpretation R703.1.1: According to Section R703.1 exception 3, a rain-screen or similar construction method is not required for most exterior siding and cladding, and single-wall construction is allowed. Drainage methods are required to conform to the manufacturer's installation instructions and other sections of the *International Residential Code*.

Note: The "water-resistive barrier" behind the exterior wall covering provides drainage of the water that may enter an exterior wall envelope. If water penetrates the exterior wall covering, the felt paper or other approved material will direct the water to the bottom of the wall where it will escape to the exterior.

703.1.2 Wind resistance. Wall coverings, backing materials and their attachments shall be capable of resisting wind loads in accordance with Tables R301.2(2) and R301.2(3). Wind-pressure resistance of the siding and backing materials shall be determined by ASTM E 330 or other applicable standard test methods. Where wind-pressure resistance is determined by design

analysis, data from approved design standards and analysis conforming to generally accepted engineering practice shall be used to evaluate the siding and backing material and its fastening. All applicable failure modes including bending rupture of siding, fastener withdrawal and fastener head pull-through shall be considered in the testing or design analysis. Where the wall covering and the backing material resist wind load as an assembly, use of the design capacity of the assembly shall be permitted.

Section 9. The following sections of Chapter 8 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 8

ROOF-CEILING CONSTRUCTION

SECTION R806

ROOF VENTILATION

R806.1 Ventilation required. Enclosed *attics* and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with

openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

Code Alternate R806.1: Exception 5 of Section R806.4 is permitted to be used for enclosed rafter spaces.

R806.2 Minimum area. The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling.

R806.3 Vent and insulation clearance. Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

R806.4 Unvented attic assemblies. Unvented *attic* assemblies (spaces between the ceiling joists of the top *story* and the roof rafters) shall be permitted if all the following conditions are met:

1. The unvented *attic* space is completely contained within the *building thermal envelope*.
2. No interior vapor retarders are installed on the ceiling side (*attic* floor) of the unvented *attic* assembly.

3. Where wood shingles or shakes are used, a minimum 1/4 inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.

4. ~~((In climate zones 5, 6, 7 and 8, any))~~ Any *air-impermeable insulation* shall be a vapor retarder, or shall have a vapor retarder coating or covering in direct contact with the underside of the insulation.

5. Either Items 5.1, 5.2 or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.

5.1. *Air-impermeable insulation* only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.

5.2. Air-permeable insulation only. In addition to the air-permeable installed directly below the structural sheathing, minimum R-10 rigid board or sheet insulation shall be installed directly above the structural roof sheathing ~~((as specified in Table R806.4))~~ for condensation control.

5.3. Air-impermeable and air-permeable insulation. ~~((The))~~ Minimum R-10 *air-impermeable insulation* shall be applied in direct contact with the underside of the structural roof sheathing ~~((as specified in Table R806.4))~~ for condensation control. The air-permeable insulation shall be installed directly under the *air-impermeable insulation*.

Section 10. The following sections of Chapter 9 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 9

ROOF ASSEMBLIES

SECTION R903

WEATHER PROTECTION

R903.4 Roof drainage. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area.

[W] R903.4.1 Overflow drains and scuppers. Where roof drains are required, overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with the ~~((International))~~ Uniform Plumbing Code. Overflow drains shall discharge to an *approved* location ~~((and shall not be connected to roof drain lines))~~.

Section 11. The following sections of Chapter 10 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 10

CHIMNEYS AND FIREPLACES

SECTION R1001

MASONRY FIREPLACES

[W] R1001.7 Lintel and throat. Masonry over a fireplace opening shall be supported by a lintel of noncombustible material. The minimum required bearing length on each end of the fireplace opening shall be 4 inches (102 mm). The fireplace throat or damper shall be located a minimum of 8 inches (203 mm) above the lintel.

R1001.7.1 Damper. Masonry fireplaces shall be equipped with a ferrous metal damper located at least 8 inches (203 mm) above the top of the fireplace opening. Dampers shall be installed in the fireplace or the chimney venting the fire place, and shall be operable from the room containing the fireplace.

Fireplaces shall be provided with each of the following:

1. Tightly fitting flue dampers, operated by a readily accessible manual or approved automatic control.

Exception: Fireplaces with gas logs shall be installed in accordance with International Mechanical Code Section 901, except that the standards for liquefied petroleum gas

installations shall be NFPA 58 (Liquefied Petroleum Gas Code) and NFPA 54 (National Fuel Gas Code).

2. An outside source for combustion air ducted into the firebox. The duct shall be at least 6 square inches, and shall be provided with an operable outside air duct damper.

Exception: Washington certified fireplaces shall be installed with the combustion air systems necessary for their safe and efficient combustion and specified by the manufacturer in accordance with Washington State Building Standard 31-2 (WAC 51-50-31200) and *International Building Code* Section 2114.

3. Site built fireplaces shall have tight fitting glass or metal doors, or a flue draft induction fan or as approved for minimizing back-drafting. Factory built fireplaces shall use doors listed for the installed appliance.

SECTION R1004

FACTORY-BUILT FIREPLACES

R1004.1 General. Factory-built fireplaces shall be *listed* and *labeled* and shall be installed in accordance with the conditions of the *listing*. Factory-built fireplaces shall be tested in accordance with UL 127.

[W] R1004.1.1 Emission standards for factory-built fireplaces. After January 1, 1997, no new or used factory-built fireplace shall be installed in Washington state unless it is certified and labeled in accordance with procedures and criteria specified in the *Washington State Building*

Code Standard 31-2. To certify an entire fireplace model line, the internal assembly shall be tested to determine its particulate matter emission performance. Retesting and recertifying is required if the design and construction specifications of the fireplace model line internal assembly change. Testing for certification shall be performed by a Washington State Department of Ecology (DOE) approved and U.S. Environmental Protection Agency (EPA) accredited laboratory.

[W] R1004.1.2 Emission standards for certified masonry and concrete fireplaces. After January 1, 1997, new certified masonry or concrete fireplaces installed in Washington state shall be tested and labeled in accordance with procedures and criteria specified in the *Washington State Building Code Standard 31-2.*

To certify an entire fireplace model line, the internal assembly shall be tested to determine its particulate matter emission performance. Retesting and recertifying is required if the design and construction specifications of the fireplace model line internal assembly change. Testing for certification shall be performed by a Washington State Department of Ecology (DOE) approved and U.S. Environmental Protection Agency (EPA) accredited laboratory.

SECTION R1006

EXTERIOR AIR SUPPLY

R1006.1 Exterior air. Factory-built or masonry fireplaces covered in this chapter shall be equipped with an exterior air supply to assure proper fuel combustion unless the room is mechanically ventilated and controlled so that the indoor pressure is neutral or positive.

1 ~~((R1006.1.1 Factory-built fireplaces. Exterior combustion air ducts for factory-built fireplaces~~
2 ~~shall be a listed component of the fireplace and shall be installed according to the fireplace~~
3 ~~manufacturer's instructions.~~

4 **R1006.1.2 Masonry fireplaces.** ~~Listed combustion air ducts for masonry fireplaces shall be~~
5 ~~installed according to the terms of their listing and the manufacturer's instructions.~~

6
7 **R1006.2 Exterior air intake.** ~~The exterior air intake shall be capable of supplying all~~
8 ~~combustion air from the exterior of the dwelling or from spaces within the dwelling ventilated~~
9 ~~with outside air such as nonmechanically ventilated crawl or attic spaces. The exterior air intake~~
10 ~~shall not be located within the garage or basement of the dwelling nor shall the air intake be~~
11 ~~located at an elevation higher than the firebox. The exterior air intake shall be covered with a~~
12 ~~corrosion-resistant screen of 1/4 inch (6 mm) mesh.))~~

13
14 **[W] R1006.2 Solid fuel burning appliances and fireplaces.** Solid fuel burning appliances and
15 fireplaces shall be provided with tight fitting metal or ceramic glass doors, and:

16
17 1. A source from outside the structure of primary combustion air, connected to the appliance as
18 per manufacturer's specification. The air inlet shall originate at a point below the fire box. The
19 duct shall be 4 inches or greater in diameter, not exceed 20 feet in length, and be installed as per
20 manufacturer's instructions; or

21
22 2. The appliance and manufacturer's recommended combustion air supply, as an installed unit,
23 shall be certified by an independent testing laboratory to have passed Test No. 11-Negative
24 Pressure Test, Section 12.3, of ULC S627-M1984 "Space Heaters for Use with Solid Fuels,"
25 modified as follows:

Negative pressure of 8 Pascal shall be initially established with the chamber sealed and the air supply, if not directly connected to the appliance, closed off.

The air supply, if not directly connected to the appliance, shall then be opened.

The maximum allowable air exchange rate from chamber leakage and intentional air supply for the unit (appliance with combustion air supply) in the test chamber is 3.5 air changes per hour, or 28 cfm (cubic feet of air per minute), whichever is less.

Exception: Combustion air may be supplied to the room in which the solid fuel burning appliance is located in lieu of direct ducting, provided that one of the following conditions is met:

1. The solid fuel burning appliance is part of a central heating plant and installed in an unconditioned space in conformance with the International Mechanical Code; or

2. The solid fuel burning appliance is installed in existing construction directly on a concrete floor or surrounded by masonry materials as in a fireplace. The combustion air terminus shall be located as close to the solid fuel burning appliance as possible and shall be provided with a barometric damper or equivalent. The combustion air source shall be specified by the manufacturer or no less than 4 inches in diameter or the equivalent in area or as approved.

Section 12. The following sections of Chapter 12 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 12

MECHANICAL ADMINISTRATION

SECTION M1201

GENERAL

[W] M1201.1 Scope. The provisions of Chapters 12 through 24 shall regulate the design, installation, maintenance, *alteration* and inspection of mechanical systems that are permanently installed and used to control environmental conditions within buildings. These chapters shall also regulate those mechanical systems, system components, *equipment* and *appliances* specifically addressed in this code.

Exception: The standards for liquefied petroleum gas installations are the 2008 edition of NFPA 58, *Liquefied Petroleum Gas Code* and the 2009 edition of ANSI Z223.1/NFPA 54, *National Fuel Gas Code*.

Section 13. The following sections of Chapter 13 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 13

GENERAL MECHANICAL SYSTEM REQUIREMENTS

SECTION M1302

APPROVAL

[W] M1302.2 Construction Documents. The plans and specifications shall show in sufficient detail pertinent data and features of the materials, equipment and systems as herein governed, including, but not limited to: design criteria, size and type of apparatus and equipment, systems and equipment controls, provisions for combustion air to fuel burning appliances, and other pertinent data to indicate conformance with the requirements of this code.

[W] M1302.3 Testing. At the discretion of the building official, flow testing may be required to verify that the mechanical system(s) satisfies the requirements of this code. Flow testing may be performed using flow hoods measuring at the intake or exhaust points of the system, in-line pitot tube, or pitot-traverse type measurement systems in the duct, short term tracer gas measurements, or other means approved by the building official.

Section 14. The following sections of Chapter 14 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 14

HEATING AND COOLING EQUIPMENT

SECTION M1415

MASONRY HEATERS

[W] M1415.1 General. ~~((Masonry heaters shall be constructed in accordance with Section R1002.))~~ Masonry heaters shall be approved by the Washington State Department of Ecology and shall contain both of the following:

1. Primary combustion air ducted from the outside of the structure to the appliance.
2. Tight fitting ceramic glass or metal doors. Flue damper, when provided, shall have an external control and when in the closed position shall have a net free area of not less than 5 percent of the flue cross sectional area.

Section 15. The following sections of Chapter 15 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 15

EXHAUST SYSTEMS

[W] SECTION M1507

MECHANICAL VENTILATION

M1507.1 General. ~~((Where toilet rooms and bathrooms are mechanically ventilated, the ventilation equipment shall be installed in accordance with this section.))~~ Source specific exhaust ventilation is required in each kitchen, bathroom, water closet, laundry room, indoor swimming pool, spa, and other rooms where water vapor or cooking odor is produced. The minimum source specific ventilation effective exhaust capacity shall not be less than levels specified in Table M1507.3.

M1507.2 Recirculation of air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another *dwelling unit* and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an *attic*, crawl space or other areas inside the building.

M1507.3 Ventilation rate. *Ventilation* systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table M1507.3.

M1507.3.1 Source specific exhaust fans. Exhaust fans providing source specific ventilation shall have a minimum fan flow rating not less than 50 cfm at 0.25 inches water gauge for bathrooms, laundries, or similar rooms and 100 cfm at 0.25 inches water gauge for kitchens. Manufacturers' fan flow ratings shall be determined as per HVI 916 (April 1995) or AMCA 210.

Exception: Where a range hood or down draft exhaust fan is used to satisfy the source specific ventilation requirements for kitchens, the range hood or down draft exhaust shall not be less than 100 cfm at 0.10 inches water gauge.

M1507.3.2 Source specific ventilation controls. Source specific ventilation systems shall be controlled by manual switches, dehumidistats, timers, or other approved means. Source specific ventilation system controls shall be readily accessible.

M1507.3.3 Source specific ventilation ducts. Source specific ventilation ducts shall terminate outside the building. Exhaust ducts shall be equipped with back-draft dampers. All exhaust ducts in unconditioned spaces shall be insulated to a minimum of R-4. Terminal elements shall have at least the equivalent net free area of the duct work. Terminal elements for exhaust fan

duct systems shall be screened or otherwise protected from entry by leaves or other material.

Minimum 50 percent net free area shall meet the requirements of R303.5.

[W] SECTION M1508

WHOLE HOUSE VENTILATION

M1508.1 General. This section establishes minimum prescriptive design requirements for whole house ventilation systems. Each dwelling unit or guest room shall be equipped with a ventilation system complying with Section M1508.4, M1508.5, M1508.6 or M1508.7. Compliance is also permitted to be demonstrated through compliance with the International Mechanical Code.

M1508.1.1 Operating instructions. Installers shall provide the manufacturer's installation, operating instructions, and a whole house ventilation system operation description.

M1508.2 Continuously operating exhaust ventilation systems. Continuously operating exhaust ventilation systems shall provide the minimum flow rates specified in Table M1508.2.

TABLE M1508.2

MINIMUM VENTILATION RATES

(Continuously operating systems)

<u>Square Footage</u>	<u>Bedrooms</u>				
	<u>0-1</u>	<u>2-3</u>	<u>4-5</u>	<u>6-7</u>	<u>>7</u>
<u><1500</u>	<u>30</u>	<u>45</u>	<u>60</u>	<u>75</u>	<u>90</u>

<u>1501-3000</u>	<u>45</u>	<u>60</u>	<u>75</u>	<u>90</u>	<u>105</u>
<u>3001-4500</u>	<u>60</u>	<u>75</u>	<u>90</u>	<u>105</u>	<u>120</u>
<u>4501-6000</u>	<u>75</u>	<u>90</u>	<u>105</u>	<u>120</u>	<u>135</u>
<u>6001-7500</u>	<u>90</u>	<u>105</u>	<u>120</u>	<u>135</u>	<u>150</u>
<u>>7500</u>	<u>105</u>	<u>120</u>	<u>135</u>	<u>150</u>	<u>165</u>

M1508.3 Intermittently operating ventilation systems. The delivered ventilation rate for intermittently operating ventilation systems shall be the combination of its delivered capacity from Table M1508.2, and its ventilation effectiveness and daily fractional operation time from Table M1508.3.

$$Q_f = Q_r / (\epsilon f)$$

Where:

Q_f = Outdoor air flow rate

Q_r = Ventilation air requirement (from Table M1508.2)

ϵ = Ventilation effectiveness (from Table M1508.3)

f = Fractional operation time is the on-time for one cycle divided by the cycle time (used in Table M1508.3)

cycle time = on-time plus off-time

TABLE M1508.3

VENTILATION EFFECTIVENESS FOR INTERMITTENT FANS

<u>Daily Fractional Operation Time, f</u>	<u>Ventilation Effectiveness, ϵ</u>
<u>$f \leq 35\%$</u>	<u>0.33</u>
<u>$35\% \leq f < 60\%$</u>	<u>0.50</u>
<u>$60\% \leq f < 80\%$</u>	<u>0.75</u>
<u>$80\% \leq f$</u>	<u>1.0</u>

For systems designed to operate at least once every three hours, ventilation effectiveness can be 1.0.

M1508.4 Intermittent whole house ventilation using exhaust fans. This section establishes minimum prescriptive requirements for intermittent whole house ventilation systems using exhaust fans. A system which meets all the requirements of this section shall be deemed to satisfy the requirements for a whole house ventilation system.

M1508.4.1 Whole house ventilation fans. Exhaust fans providing whole house ventilation shall have a flow rating at 0.25 inches water gauge as specified in Table M1508.2. Manufacturers' fan flow ratings shall be determined according to HVI 916 (April 1995) or AMCA 210.

M1508.4.2 Fan noise. Whole house fans located 4 feet or less from the interior grille shall have a sone rating of 1.0 or less measured at 0.1 inches water gauge. Manufacturer's noise ratings shall be determined as per HVI 915 (October 1995). Remotely mounted fans shall be acoustically isolated from the structural elements of the building and from attached duct work using insulated flexible duct or other approved material.

M1508.4.3 Fan controls. The whole house ventilation fan shall be controlled by a 24-hour clock timer with the capability of continuous operation, manual and automatic control. The 24-hour timer shall be readily accessible. The 24-hour timer shall be capable of operating the whole house ventilation fan without energizing other energy-consuming appliances. At the time of final inspection, the automatic control timer shall be set to operate the whole house fan for at least 8 hours a day. A label shall be affixed to the control that reads "Whole House Ventilation (see operating instructions)."

M1508.4.4 Exhaust ducts. All exhaust ducts shall terminate outside the building. Exhaust ducts shall be equipped with back-draft dampers. All exhaust ducts in unconditioned spaces shall be insulated to a minimum of R-4.

M1508.4.5 Outdoor air inlets. Outdoor air shall be distributed to each habitable room by individual outdoor air inlets. Where outdoor air supplies are separated from exhaust points by doors, provisions shall be made to ensure air flow by installation of distribution ducts, undercutting doors, installation of grilles, transoms, or similar means. Doors shall be undercut to a minimum of 1/2 inch above the surface of the finish floor covering.

Individual room outdoor air inlets shall:

1. Have controllable and secure openings;
2. Be sleeved or otherwise designed so as not to compromise the thermal properties of the wall or window in which they are placed;
3. Provide not less than 4 square inches of net free area of opening for each habitable space.

Any inlet or combination of inlets which provide 10 cfm at 10 Pascals as determined by the

Home Ventilating Institute Air Flow Test Standard (HVI 901 November 1996) are deemed equivalent to 4 square inches net free area.

Inlets shall be screened or otherwise protected from entry by leaves or other material.

Outdoor air inlets shall be located so as not to take air from the following areas:

1. Closer than 10 feet from an appliance vent outlet, unless such vent outlet is 3 feet above the outdoor air inlet.

2. Where it will pick up objectionable odors, fumes or flammable vapors.

3. A hazardous or unsanitary location.

4. A room or space having any fuel-burning appliances therein.

5. Closer than 10 feet from a vent opening of a plumbing drainage system unless the vent opening is at least 3 feet above the air inlet.

6. Attic, crawl spaces, or garages.

M1508.5 Intermittent whole house ventilation integrated with a forced-air system. This section establishes minimum prescriptive requirements for intermittent whole house ventilation systems integrated with forced-air ventilation systems. A system which meets all the requirements of this section shall be deemed to satisfy the requirements for a whole house ventilation system.

M1508.5.1 Integrated whole house ventilation systems. Integrated whole house ventilation systems shall provide outdoor air at the rate calculated using Section M1508.3. Integrated forced-air ventilation systems shall distribute outdoor air to each habitable room through the

forced-air system ducts. Integrated forced-air ventilation systems shall have an outdoor air inlet duct connecting a terminal element on the outside of the building to the return air plenum of the forced-air system, at a point within 4 feet upstream of the air handler. The outdoor air inlet duct connection to the return air stream shall be located upstream of the forced-air system blower and shall not be connected directly into a furnace cabinet to prevent thermal shock to the heat exchanger. The system shall be equipped with a motorized damper connected to the automatic ventilation control as specified in Section M1508.5.2. The required flow rate shall be verified by field testing with a flow hood or a flow measuring station.

M1508.5.2 Ventilation controls. The whole house ventilation system shall be controlled by a 24-hour clock timer with the capability of continuous operation, manual and automatic control. This control shall control the forced air system blower and the automatic damper. The 24-hour timer shall be readily accessible. The 24-hour timer shall be capable of operating the whole house ventilation system without energizing other energy-consuming appliances. At the time of final inspection, the automatic control timer shall be set to operate the whole house system for at least 8 hours a day. A label shall be affixed to the control that reads "Whole House Ventilation (see operating instructions)."

M1508.5.3 Ventilation duct insulation. All supply ducts in the conditioned space shall be insulated to a minimum of R-4.

M1508.5.4 Outdoor air inlets. Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

1. Closer than 10 feet from an appliance vent outlet, unless such vent outlet is 3 feet above the outdoor air inlet.

2. Where it will pick up objectionable odors, fumes or flammable vapors.

3. A hazardous or unsanitary location.

4. A room or space having any fuel-burning appliances therein.

5. Closer than 10 feet from a vent opening of a plumbing drainage system unless the vent opening is at least 3 feet above the air inlet.

6. Attic, crawl spaces, or garages.

M1508.6. Intermittent whole house ventilation using a supply fan. This section establishes minimum prescriptive requirements for intermittent whole house ventilation systems using an inline supply fan. A system which meets all the requirements of this section shall be deemed to satisfy the requirements for a whole house ventilation system.

M1508.6.1 Outdoor air. Supply fan ventilation systems shall distribute outdoor air to each habitable room through the forced-air system ducts or through dedicated ducts to each habitable room. Supply fans shall have the capacity to provide the amount of outdoor air specified in Table M1508.2 at 0.40 inches water gauge as per HVI 916 (April 1995). The outdoor air shall be filtered before it is delivered to habitable rooms. The filter may be located at the intake device, in line with the fan, or, in the case of a connection to the return plenum of the air handler, using the furnace filter. An outdoor air inlet shall be connected to either the supply or return air stream.

M1508.6.2 Ducts. An outdoor air inlet duct connection to the supply air stream shall be located downstream of the forced-air system blower. An outdoor air inlet duct connection to the return air stream shall be located at least 4 feet upstream of the forced-air system blower and its filter. Neither type of duct shall be connected directly into a furnace cabinet to prevent thermal shock to the heat exchanger. The outdoor air inlet duct shall be prescriptively sized in accordance with Table M1508.6.2. The terminal element on the outside of the building shall be sized 2 inches in diameter larger than the outdoor air inlet duct.

TABLE M1508.6.2

PRESCRIPTIVE SUPPLY FAN DUCT SIZING

<u>Supply Fan Tested cfm at 0.40" wg</u>		
<u>Specified Volume from Table</u>	<u>Minimum Smooth Duct</u>	<u>Minimum Flexible Duct</u>
<u>1508.2</u>	<u>Diameter</u>	<u>Diameter</u>
<u>50 - 90 cfm</u>	<u>4 inch</u>	<u>5 inch</u>
<u>90 - 150 cfm</u>	<u>5 inch</u>	<u>6 inch</u>
<u>150 - 250 cfm</u>	<u>6 inch</u>	<u>7 inch</u>
<u>250 - 400 cfm</u>	<u>7 inch</u>	<u>8 inch</u>

M1508.6.3 Dampers. The system shall be equipped with a back-draft damper and one of the following:

1. A calibrated manual volume damper installed and set to meet the measured flow rates specified in Table M1508.2 by field testing with a pressure gauge and/or following manufacturer's installation instructions; or

2. A manual volume damper installed and set to meet the measured flow rates specified in Table M1508.2 by field testing with a flow hood or a flow measuring station; or

3. An automatic flow-regulating device sized to the specified flow rates in Table M1508.2 which provides constant flow over a pressure range of 0.20 to 0.60 inches water gauge.

M1508.6.4 Ventilation controls. The whole house ventilation system shall be controlled by a 24-hour clock timer with the capability of continuous operation, manual and automatic control. This will control the inline supply fan. The 24-hour timer shall be readily accessible. The 24-hour timer shall be capable of operating the whole house ventilation system without energizing other energy-consuming appliances. At the time of final inspection, the automatic control timer shall be set to operate the whole house system for at least 8 hours a day. A label shall be affixed to the control that reads "Whole House Ventilation (see operating instructions)."

M1508.6.5 Ventilation duct insulation. All supply ducts in the conditioned space shall be insulated to a minimum of R-4.

M1508.6.6 Outdoor air inlets. Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

1. Closer than 10 feet from an appliance vent outlet, unless such vent outlet is 3 feet above the outdoor air inlet.

2. Where it will pick up objectionable odors, fumes or flammable vapors.

3. A hazardous or unsanitary location.

4. A room or space having any fuel-burning appliances therein.

5. Closer than 10 feet from a vent opening of a plumbing drainage system unless the vent opening is at least 3 feet above the air inlet.

6. Attic, crawl spaces, or garages.

M1508.7 Intermittent whole house ventilation using a heat recovery ventilation system.

This section establishes minimum prescriptive requirements for intermittent whole house ventilation using a heat recovery ventilation system.

M1508.7.1 Heat recovery ventilation systems. All duct work in heat recovery systems shall be sized and installed per the manufacturer's instructions. System minimum flow rating shall be not less than that specified in Table M1508.2. Heat recovery ventilation systems shall have a filter on the upstream side of the heat exchanger in both the intake and exhaust airstreams with a minimum efficiency ratings value (MERV) of 6.

M1508.7.2 Ventilation controls. The whole house ventilation system shall be controlled by a 24-hour clock timer with the capability of continuous operation, manual and automatic control. This control shall control the inline supply fan. The 24-hour timer shall be readily accessible. The 24-hour timer shall be capable of operating the whole house ventilation system without energizing other energy-consuming appliances. At the time of final inspection, the automatic

control timer shall be set to operate the whole house system for at least 8 hours a day. A label shall be affixed to the control that reads "Whole House Ventilation (see operating instructions)."

M1508.7.3 Ventilation duct insulation. All supply ducts in the conditioned space installed upstream of the heat exchanger shall be insulated to a minimum of R-4.

M1508.7.4 Outdoor air inlets. Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas:

1. Closer than 10 feet from an appliance vent outlet, unless such vent outlet is 3 feet above the outdoor air inlet.
2. Where it will pick up objectionable odors, fumes or flammable vapors.
3. A hazardous or unsanitary location.
4. A room or space having any fuel-burning appliances therein.
5. Closer than 10 feet from a vent opening of a plumbing drainage system unless the vent opening is at least 3 feet above the air inlet.
6. Attic, crawl spaces, or garages.

Section 16. The following sections of Chapter 16 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 16

DUCT SYSTEMS

SECTION M1601

DUCT CONSTRUCTION

[W] M1601.1.1 Above-ground duct systems. Above-ground duct systems shall conform to the following:

1. Equipment connected to duct systems shall be designed to limit discharge air temperature to a maximum of 250°F (121°C).

2. Factory-made air ducts shall be constructed of Class 0 or Class 1 materials as designated in Table M1601.1.1(1).

3. Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.

4. Minimum thickness of metal duct material shall be as listed in Table M1601.1.1(2). Galvanized steel shall conform to ASTM A 653.

5. Use of gypsum products to construct return air ducts or plenums is permitted, provided that the air temperature does not exceed 125°F (52°C) and exposed surfaces are not subject to condensation.

6. Duct systems shall be constructed of materials having a flame spread index not greater than 200.

7. Stud wall cavities and the spaces between solid floor joists shall not be used as a duct or an air plenum in new construction. For existing systems, stud wall cavities and the spaces between solid floor joists to be used as air plenums shall comply with the following:

1 7.1. These cavities or spaces shall not be used as a plenum for supply air.

2 7.2. These cavities or spaces shall not be part of a required fire-resistance-rated assembly.

3 7.3. Stud wall cavities shall not convey air from more than one floor level.

4 7.4. Stud wall cavities and joist-space plenums shall be isolated from adjacent concealed
5 spaces by tight-fitting fire blocking in accordance with Section R602.8.
6

7 ***

8
9 Section 17. The following sections of Chapter 17 of the International Residential Code,
10 2009 Edition, are amended as follows:

11 **CHAPTER 17**

12 **COMBUSTION AIR**

13 **SECTION M1701**

14 **GENERAL**

15
16 **[W] M1701.1 Scope.** Solid-fuel-burning appliances shall be provided with combustion air in
17 accordance with the appliance manufacturer's installation instructions. Oil-fired appliances shall
18 be provided with combustion air in accordance with NFPA 31. The methods of providing
19 combustion air in this chapter do not apply to fireplaces, fireplace stoves and direct-vent
20 appliances. The requirements for combustion and dilution air for gas-fired appliances shall be in
21 accordance with Chapter 24.
22

23 Fireplaces shall comply with Section 1001.
24

25 ***
26
27
28

Section 18. The following sections of Chapter 20 of the International Residential Code, 2009 Edition, are amended as follows:

CHAPTER 20

BOILERS AND WATER HEATERS

~~((SECTION M2001~~

~~BOILERS~~

~~**M2001.1 Installation.** In addition to the requirements of this code, the installation of boilers shall conform to the manufacturer's instructions. The manufacturer's rating data, the nameplate and operating instructions of a permanent type shall be attached to the boiler. Boilers shall have all controls set, adjusted and tested by the installer. A complete control diagram together with complete boiler operating instructions shall be furnished by the installer. Solid and liquid fuel burning boilers shall be provided with *combustion air* as required by Chapter 17.~~

~~**M2001.1.1 Standards.** Oil fired boilers and their control systems shall be listed and *labeled* in accordance with UL 726. Electric boilers and their control systems shall be *listed* in accordance with UL 834. Boilers shall be designed and constructed in accordance with the requirements of ASME CSD-1 and as applicable, the *ASME Boiler and Pressure Vessel Code*, Sections I and IV. Gas fired boilers shall conform to the requirements listed in Chapter 24.~~

~~**M2001.2 Clearance.** Boilers shall be installed in accordance with their *listing* and *label*.~~

~~**M2001.3 Valves.** Every boiler or modular boiler shall have a shutoff valve in the supply and return piping. For multiple boiler or multiple modular boiler installations, each boiler or modular boiler shall have individual shutoff valves in the supply and return piping.~~

Exception: ~~Shutoff valves are not required in a system having a single low pressure steam boiler.~~

M2001.4 Flood-resistant installation. ~~In areas prone to flooding as established in Table R301.2(1), boilers, water heaters and their control systems shall be located or installed in accordance with Section R322.1.6.~~

SECTION M2002

OPERATING AND SAFETY CONTROLS

M2002.1 Safety controls. ~~Electrical and mechanical operating and safety controls for boilers shall be *listed* and *labeled*.~~

M2002.2 Hot water boiler gauges. ~~Every hot water boiler shall have a pressure gauge and a temperature gauge, or combination pressure and temperature gauge. The gauges shall indicate the temperature and pressure within the normal range of the system's operation.~~

M2002.3 Steam boiler gauges. ~~Every steam boiler shall have a water gauge glass and a pressure gauge. The pressure gauge shall indicate the pressure within the normal range of the system's operation. The gauge glass shall be installed so that the midpoint is at the normal water level.~~

M2002.4 Pressure-relief valve. ~~Boilers shall be equipped with pressure relief valves with minimum rated capacities for the *equipment* served. Pressure relief valves shall be set at the maximum rating of the boiler. Discharge shall be piped to drains by gravity to within 18 inches (457 mm) of the floor or to an open receptor.~~

M2002.5 Boiler low water cutoff. ~~All steam and hot water boilers shall be protected with a low water cutoff control. The low water cutoff shall automatically stop the combustion operation of~~

1 ~~the appliance when the water level drops below the lowest safe water level as established by the~~
2 ~~manufacturer.~~

3 **SECTION M2003**

4 **EXPANSION TANKS**

5 ~~**M2003.1 General.** Hot water boilers shall be provided with expansion tanks. Nonpressurized~~
6 ~~expansion tanks shall be securely fastened to the structure or boiler and supported to carry twice~~
7 ~~the weight of the tank filled with water. Provisions shall be made for draining nonpressurized~~
8 ~~tanks without emptying the system.~~

9
10 ~~**M2003.1.1 Pressurized expansion tanks.** Pressurized expansion tanks shall be consistent with~~
11 ~~the volume and capacity of the system. Tanks shall be capable of withstanding a hydrostatic test~~
12 ~~pressure of two and one-half times the allowable working pressure of the system.~~

13
14 ~~**M2003.2 Minimum capacity.** The minimum capacity of expansion tanks shall be determined~~
15 ~~from Table M2003.2.))~~

16 ***
17

18 Section 19. The provisions of this ordinance are declared to be separate and severable.
19 The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this
20 ordinance, or the invalidity of the application thereof to any person, owner, or circumstance shall
21 not affect the validity of the remainder of this ordinance, or the validity of its application to other
22 persons, owners, or circumstances.
23

24 Section 20. Sections 2 -15 of Ordinance 122533 are repealed and Sections 1-9 of
25 Ordinance 122774 are repealed.
26

1 Section 21. For a period of 60 days following the effective date of this ordinance, the
2 Director may also accept and thereafter approve applications that are designed to comply with
3 either the requirements of this Ordinance or the requirements of Ordinance 122533 as amended
4 by Ordinance 122774.

5 Section 22. The following findings of fact are adopted in accordance with Washington
6 Administrative Code 51-04-030 in support of amendments to Section R107:
7

- 8 • Seattle is a densely-occupied city with a very large number of existing buildings; much of
9 the building construction activity in Seattle consists of altering existing buildings for
10 reuse.
11
- 12 • Flexibility in applying code provisions is necessary to accommodate the variety of
13 buildings in Seattle that were constructed under codes dating as far back as the 1800s.
14 The flexibility in Seattle's existing building provisions recognizes that standards that are
15 reasonable for new construction are often infeasible for older buildings.
16
- 17 • Seattle's existing building provisions result in safety improvements to buildings when
18 strict adherence to all the code requirements would often result in older buildings not
19 being reused and not being upgraded.
20
- 21 • Seattle is a densely-developed city with high seismic risk:
 - 22 ○ Seattle has experienced three significant earthquakes in the past 60 years.
 - 23 ○ Seattle has a seismic fault located directly below areas that are liquefaction-prone,
24 have large numbers of unreinforced masonry buildings, and are densely-populated
25 and heavily-developed.
26

- Seattle has experienced a greater rate of damage to buildings resulting from earthquakes than most other jurisdictions in Washington.

- The International Codes do not require seismic upgrades of existing buildings—Seattle codes' substantial alteration provisions require upgrades of unaltered portions of buildings. The upgrades are not required to conform to the standards for new construction because such standards are often infeasible for older buildings, and Seattle codes' substantial alteration provisions are the most suitable provisions for Seattle's unique conditions.
- The Building Code provisions have been in place in general form for many years, providing consistency for owners of buildings and helping them predict what rules will apply as they plan the future use of their buildings.
- Seattle has expert staff with training, education, and experience to use judgment in applying the discretionary provisions.

Section 23. The amendments to Section R107 of the International Residential Code, 2009 edition, contained in Section 2 of this ordinance shall take effect on the later of: 1) 30 days from and after their approval by the Mayor, but if not approved and returned by the Mayor within ten days after presentation, they shall take effect as provided by Seattle Municipal Code Section 1.04.020, or 2) the date of approval of these amendments by the State Building Code Council.

Section 24. Except for Section R107 of the International Residential Code, this ordinance shall take effect and be in force 30 days from and after its approval by the Mayor, but if not

1 approved and returned by the Mayor within ten days after presentation, it shall take effect as
2 provided by Seattle Municipal Code Section 1.04.020.

3 Passed by the City Council the ____ day of _____, 2010, and
4 signed by me in open session in authentication of its passage this
5 ____ day of _____, 2010.
6

7
8 _____
9 President _____ of the City Council

10 Approved by me this ____ day of _____, 2010.
11

12
13 _____
14 Michael McGinn, Mayor

15 Filed by me this ____ day of _____, 2010.
16

17
18 _____
19 City Clerk

20 (Seal)
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